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**Before the
Federal Communications Commission
Washington, DC 20554**

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)	
2002 Biennial Regulatory Review – Review of the)	MB Docket No. 02-277
Commission’s Broadcast Ownership Rules and)	
Other Rules Adopted Pursuant to Section 202 of)	
the Telecommunications Act of 1996)	
)	
Cross-Ownership of Broadcast Stations and)	MM Docket No. 01-235
Newspapers)	
)	
Rules and Policies Concerning Multiple)	MM Docket No. 01-317
Ownership of Radio Broadcast Stations)	
in Local Markets)	
)	
Definition of Radio Markets)	MM Docket No. 00-244

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EXECUTIVE SUMMARY

The Information Policy Institute is the nation's premier center for research, education, and outreach on all matters pertaining to the regulation of information in the United States and globally.¹ Our initial comments, and the accompanying appendices, raise serious questions about the economic and public interest justifications for a further relaxation of existing media ownership rules.

The Commission is to be commended for advancing notions of reform in its *Notice of Proposed Rulemaking* intended to enable the Commission to more efficiently adjust to the realities of the technologically dynamic industries which they oversee.² Despite a well-intended vision for regulatory regime change, we are concerned about the potential impact of relaxed media ownership rules upon information flows to citizens in two contexts that characterize the institutional infrastructure of our nation – the capitalist free market and the democratic polity.

The Commission's *Notice* signals a clear intent to execute a fundamental regime change. Under the new regime, the list of core public interests guiding

¹ We are a non-partisan, non-profit organization funded by for-profit and not-for-profit entities that support our general mission. For a discussion of our mission, a thorough description of the Institute and our staff, access to our past studies, a listing of supporters, visit our Web site at www.infopolicy.org.

regulatory decisions would be expanded from its current list – localism, diversity, and competition - to include technological innovation. In addition, a greater reliance would be placed on market mechanisms for achieving these objectives, with the Commission engaged in a higher degree of regulatory forbearance.

During the process of transition to this new regime, much of the wisdom of past Commission decisions will be disregarded as the regulatory structure built over the previous 70 years stands to be rapidly dismantled. Parties interested in preserving elements of the former regime are required to meet the strictest standards of proof, demonstrating unequivocally that the preservation of a rule is *necessary* to the protection of a public interest. In the context of this proceeding, this is a burden of proof few, if any, interested parties have the time or capacity to bear.

Moreover, we believe that the Commission's views are colored by a myopic reliance on two 50-year old theories. In the first case, their dependence on Peter Steiner's notions of media concentration and their effect on viewpoint diversity is anachronistic, given reams of subsequent empirical data to contradict his thesis. In the second case, their apparent ambivalence about market concentration is predicated on Joseph Schumpeter's views of an innovative

² In the matter of 2002 Biennial Regulatory Review - Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MB Docket No. 02-277; Cross-Ownership of Broadcast Stations and Newspapers, MM-Docket No. 01-235; Rules and Policies Concerning Multiple Ownership of Radio Broadcast

marketplace. In fact, they misread or at least misrepresent Schumpeter, by conflating market power with firm size.

We suspect the way the Commission has chosen to read Steiner and Schumpeter belies a broader issue: they fail to properly appreciate the relationship between market concentration and consumer harm. Unchecked and continued concentration of market power in the media will lead to two types of consumer harm: first, an information divide resulting from an increasing number of content options migrating to a “for-fee” model; and second, advertising costs rising to the point where consumers have less information about the marketplace as smaller advertisers are priced out, and as consumers are forced to absorb the higher costs of advertising in the form of increased costs for consumer goods. The potential for parallel harms – to the democratic polity and to the consumer marketplace – again underscore our view that it is imperative that the Commission undertake further study before relaxing regulations in such a way that would encourage further market consolidation and concentration.

Correctly, the Commission has identified issues of relevant geographic and product market as topics for study. This has been compelled by, on the one hand, their observations of the dynamism of the market, and on the other, court decisions such as *Sinclair*, which have pushed the Commission towards a stable

Stations in Local Markets, MM Docket No. 01-317; Definition of Radio Markets, MM Docket No. 00-244: Notice of Proposed Rule Making, September 23, 2002 (hereafter, *Notice*).

market picture for rules applying to similarly defined markets. These are of course, extremely complex questions, varying across scope (i.e. local vs. national) and market type (subscriber vs. advertiser vs. viewer/listener). While the language of the *Notice* suggests the Commission appreciates the complexity of the issues raised, we feel their reaction is inappropriate. Rather than maintain existing ownership limits until adequate research has been conducted, the Commission instead seems to regard this as a reason for relaxing existing rules, and in some cases, pushing for expanded definitions of voices. Our inclination is to recommend further study before a rush to action, and to consider the use of other measures (the Department of Justice's Merger Guidelines seems an appropriate starting point) to make determinations of what constitutes an independent voice, or where relevant, factor in weighted variables such as market-share.

To its credit, the Commission's Working Group on Media Ownership has undertaken a series of studies that attempt to assess the impact of additional media concentration on a number of affected parties, including consumers and advertisers. Undeniably, this is a tall order, as it involves a large amount of speculation and hypothesizing. In some cases, individual studies were up to the challenge, and yielded useful insights with a high degree of policy relevance. In many cases, however, the studies were inconclusive and frequently contradictory. They employ complex economic analysis using hypotheses, modeling techniques, and variables that are so theoretical as to be entirely

divorced from reality. Further, these studies generally ignore the human element of choice and desirability in the relationships they seek to explain. Finally, when findings are derived that are inconclusive, no rationale is advanced that would explain which of a range of outcomes would be most likely to occur given greater levels of concentration likely to result from a relaxation of existing media ownership rules.

Although the Notice raises a host of relevant questions and presents an equal number of inferences, arguments, and assertions, addressing each of these and defending our positions with irrefutable empirical evidence are well beyond the resources and capacity of our humble enterprise. As a result, we have chosen to focus on a few key issues directly relevant to our core group of policy interests.

The body of this paper is divided into eight sections, all of which caution the FCC to consider additional factors before they either reconstruct their definition of relevant market for a particular ownership rule, or relax their ownership regulations generally. Some sections directly address specific policy instruments, such as the *Local TV Multiple Ownership Rule*³, while others speak to FCC staff studies and broad themes of regulatory oversight. In general, we have emphasized the competitive effects of the specific policy instruments or theoretical definitions discussed, as opposed to questions of diversity or localism.

While the issues addressed are wide-ranging, the sections are thematically ordered: in the first two sections, we examine issues of consumer welfare; while the second two sections emphasize advertiser welfare; the fifth section examines a theoretical model with implications for consumers and advertisers alike; in the following two sections we consider the philosophical underpinnings of the Commission's decisions; finally, picking up on themes of viewpoint diversity raised in the penultimate section, we turn to the National TV Ownership rules.

Though it may seem to be at first glance, this is not simply an inchoate collection of methodological quibbles. Taken together, the issues we raise throughout demonstrate the overwhelming difficulty in meeting the "necessity" standard for defense of any regulatory remedy. The presumption of change built into Section 202h of the 1996 Telecommunications Act and successive pertinent court decisions create a framework by which any extant FCC regulatory edifice is at risk, and not in such a way that will somehow organically adapt to the innovative nature of the marketplace. The Commission's review of rules at two-year intervals inevitably results in poor data and incomplete analysis that can rarely meet the "necessity" standard for defense of extant regulations; the Commission only very recently relaxed regulations in 1996, and in successive biennial reviews. Moreover, the presumption of market dynamism underwriting the Commission's thinking seems odd given the maturity of most of the technologies at work. In sum, we regard this standard for regulatory oversight

³ *Op. Cit.*

as a *de facto* abdication of the Commission's responsibility for promoting its statutory goals of diversity, competition, and localism.

In **Section One** we discuss the *Local TV Multiple Ownership Rule* and raise the concern that the impact of concentration on the local broadcast TV market cannot be adequately assessed until questions regarding the definition of "relevant voices," and how one is to assign relative weights to those voices, are addressed. First, we argue that the dependence of the rule on station rankings is methodologically flawed, given the tendency of those rankings to vary frequently within a season. Second, we discuss the inconsistencies between definitions of voices in a local TV market highlighted by the *Sinclair*⁴ decision. We find that it is sensible to accommodate a voice definition that includes cable and broadcast (and ultimately, DBS) as voices for clearing video entertainment, but also find it necessary to create a separate definition for information content. Finally, we find it difficult to sustain the exclusion of low power television licensees from the definition of voices – although we note that due to the slim viewership of these outlets, their inclusion would have a negligible effect on concentration levels in most local TV markets.

⁴ *Sinclair Broadcast Group, Inc. v. FCC*, 284 F.3d 148 (D.C. Cir. 2002) ("*Sinclair*"), rehearing denied Aug. 13, 2002, addressed the local TV ownership rule.

In **Section Two** we address FCC Media Ownership Working Paper #3, “Consumer Substitution Among Media” by Joel Waldfogel⁵. We critique Waldfogel’s discussion of the degree of substitution among various media for information and entertainment consumers. Where Waldfogel finds sufficient evidence to argue that various media are not longer distinct, we argue that consumer context, repackaging of content across media, and the nature of certain types of information, render his conclusion premature. However, we find merit in Waldfogel’s examination of the effects of substitution of non-local media for local media on the civic behavior of information consumers. In particular, we are quite concerned with the prospect of such substitution negatively impacting local civic participation.

In **Section Three** we discuss examples of extremely weak or non-existent cross-price elasticity of demand across media in local advertising markets. In our research on the pricing of local cable television advertising in the Eastern Massachusetts and Southern New Hampshire, we find little or no responsiveness to changes in newspaper advertising rates or local broadcast television rates⁶. These findings are corroborated by FCC Working Paper #10, which finds weak substitutability between local television, radio, and newspaper

⁵ Waldfogel, Joel. “Consumer Substitution Among Media,” *Federal Communications Commission, Media Ownership Working Group*. September 2002.

⁶ Turner, Michael. “Prime v. AT&T: An Economic Analysis”, in the matter of *Prime Communications, Inc., Plaintiff vs. AT&T Corp. and AT&T Broadband LLC, Defendants*, Civil Action No. 01-CV-10805-MLW

advertising⁷. We argue that local advertisers view various media as substitutable only in so far as they deliver equivalent communications for an equivalent price – that is to say, advertisers are acutely sensitive to the qualitative and quantitative advantages of one media to another, and their advantages when deployed in concert in a media mix. We recommend that the Commission acknowledge these findings before broadening local advertising market definitions in such a way that blurs the substantive distinctions between media.

Section Four argues there are significant methodological flaws with FCC Media Bureau Staff Research Paper #4, “Consolidation and Advertising in Local Radio Markets.” We raise questions about the study’s central finding, specifically, that the vast majority of the increase in real advertising rates from 1996 to 2001 can be attributed to economic growth as opposed to local concentration. We conclude that this view is difficult to defend on account of the absence of local data and the relative economic growth observed during the period. In the final analysis, we find the study is highly suspect as a justification for further relaxation of existing regulatory restrictions.

⁷ Bush, C. Anthony. “On the Substitutability of Local Newspaper, Radio and Television Advertising in Local Business Sales.” *Federal Communications Commission*, Working Group on Media Ownership Paper #10. September, 2002.

Section Five examines the theoretical model developed by the FCC staff in Staff Research Paper #6⁸. The staff paper puts forth a microeconomic model of consumers, advertisers, and broadcasters to describe and discuss the effects of an increase in concentration on variables such as the fraction of time broadcasters allocate to programming or advertising, advertising prices, and the relative profitability of these activities. In some cases, the model convincingly demonstrates that increasing concentration is bad for consumer welfare and for advertising prices. However, at the end of the day, we find the oversimplification necessary to derive the model minimizes its real-world implications.

Section Six critiques the FCC's reasoning that substantial relaxation of current media ownership restrictions will foster an environment conducive to innovation. We argue, that by placing innovation alongside its traditional policy objects of diversity, competition, and localism, the FCC is divorcing innovation from a competitive market structure. Implicit in this view is the notion that increased vertical and horizontal concentration can be justified because innovation often demands economies of scale or scope. We argue that this notion is premised on a misunderstanding of its obviously Schumpeterian inspiration. On Schumpeter's view, what is required for innovation is firm size, and not market power *per se*, and moreover, the Commission has misunderstood

⁸ Cunningham, Brenda C. and Peter J. Alexander. "A Theory of Broadcast Media Concentration and Commercial Advertising," *Federal Communications Commission, Media Ownership Working*

Schumpeter's view of monopoly power. We find the Commission's cavalier attitude about increasing concentration in the media industry troubling and we reassert what we view to be plainly obvious: a competitive marketplace is optimal for technological innovation.

Section Seven finds another theoretical underpinning of the Commission's efforts to be wanting: its reliance on Peter Steiner's 50 year-old theory of consumer preferences. Steiner's theory contends that as the number of channels increases, there is an economic incentive to diversify programming: as majority viewers are fragmented across competing channels, at a certain point a channel devoted to minority tastes will become economically profitable. Moreover, the theory implies that viewpoint diversity can still be achieved in a highly concentrated marketplace. We find this argument flawed on several grounds: one, even if new outlets emerge to serve minority viewers, majority-targeted programming will still be oversupplied due to its greater relative profitability; two, the biases of advertisers will likewise tilt offerings of content towards majority interests; and finally, its reliance on a unidirectional relationship between consumer preferences and programming which runs counter to the reality that consumer preferences are highly influenced by programming decisions.

In **Section Eight** we turn to theme of viewpoint diversity raised in the prior section, and discuss the merit of retaining national ownership caps. While we concede the point that the relevant geographic market for considering viewpoint diversity is in fact local, we argue that the sphere of influence of national networks extends to content offerings in local markets, and has a significant effect on viewpoint diversity. We refute the Commission's argument that non-network owned affiliates act as a countervailing influence on programming decisions at the local level. Instead we contend, that economic imperatives make it highly unlikely that non-network owned affiliates will exercise their right to not air programming provided by the network with which they are affiliated.

1 Local TV and the Public Interest

The FCC has long held that its mission in setting communications policy is to protect and advance the public interest and that the principal function of the broadcast media is to inform the citizenry. It follows that a diversity of antagonistic viewpoints from a multiplicity of sources is a necessity for promoting a well-informed citizenry and is essential to the functioning of democracy. By its own admission, the Commission, in its *1984 Multiple Ownership Report and Order*, has “....concluded that the relevant geographic market for considering viewpoint diversity is local, not national.”⁹ The Commission further stated in its *1984 Report* that “.....we noted that the most important idea markets are local...[N]ational broadcast ownership limits, as opposed to local ownership limits, ordinarily are not pertinent to assuring a diversity of views to the constituent elements of the American public.”¹⁰ Our own views on maintaining viewpoint diversity at the local level are not dissimilar.

Perhaps the first question they pose in the *Notice* with respect to viewpoint diversity in a local market is how should a “voice” in the television media market be defined? How should it be weighted in relation to other voices? Which is the relevant market to be considered – news or entertainment? Further

⁹ In the matter of 2002 Biennial Regulatory Review - Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MB Docket No. 02-277; Cross-Ownership of Broadcast Stations and Newspapers, MM-Docket No. 01-235; Rules and Policies Concerning Multiple Ownership of Radio Broadcast Stations in Local Markets, MM Docket No. 01-317; Definition of Radio Markets, MM Docket No. 00-244: Notice of Proposed Rule Making, September 23, 2002 (hereafter, *Notice*) ¶ 132.

how should these voices be considered from the perspective of the consumer whose welfare the Commission seeks to protect? While the recent FCC Media Bureau staff studies address many issues concerning broadcast TV in the multi-channel and multi-media market place, they do not address the roles played at the local level by broadcast stations vis-à-vis cable channels in the dissemination of news and entertainment content, or with respect to radio or newspapers. Once the issue of defining the relevant voices, relevant markets, and their respective roles is resolved, the impact of concentration can be properly assessed.

1.1 Local TV Ownership: the Current Rule

The current local TV ownership rule allows an entity to own two broadcast stations in the same market as long as their Grade B contours do not overlap, at least one is not ranked in the top four stations in that DMA, and at least eight independently owned full-power stations would remain in that market. Two issues are immediately evident in these criteria: the use of station rankings, which vary frequently during a given broadcast season, and the lack of a clear definition of voices in terms of the purpose they serve. Additionally, one question that has not been addressed is how to consider the role of low-power TV stations in local markets. LPTVs are not currently counted as voices in local TV ownership rules despite serving a distinctly local purpose.

¹⁰ Notice, ¶ 133.

First, regarding rankings, to the extent that a station's rank is equivalent to its ratings standing, station rankings vary from quarter to quarter, making it possible for a station to be ranked in the top four sometimes during a broadcast season, but not at other times. For example, in Los Angeles during the May 2000¹¹ ratings period, the top four stations were KABC, KNBC, KTTV (affiliated with FOX) and KMEX (affiliated with Univision). In the previous ratings period in February, the top four were KABC, KNBC, KTTV, and KTLA (affiliated with the WB). During the six ratings periods spanning the November 1998 to May 2000, KMEX was ranked fourth twice and KTLA three times, while in the February 2000 period, KCBS surpassed both to claim the fourth position. If one of the top three station groups wanted to acquire the WB or Univision station in Los Angeles it would have been legal approximately 50% of the time over an 18 month period. Although it's not likely that any of these station combinations would occur, the relevant point is that station rankings can and do vacillate over short periods of time. As a result, using this metric in evaluating local ownership is problematic.

1.2 Defining Voices

Second, we turn to the issue of contending official definitions of voices in a local TV market. In the *Sinclair* decision, the Courts challenged the current form of the rule which only includes broadcast TV stations as voices, stating that this is inconsistent with the definition of voices under the TV/radio cross ownership rule which counts other media, notably cable programming networks

¹¹ Ratings data from Nielsen Media Research.

and newspapers, in addition to TV and radio to be voices.¹² While the Court agreed that the FCC had “adequately explained how the [local TV ownership rule] furthers diversity at the local level and is necessary and in the ‘public interest’ under § 202(h) of the 1996 Act,”¹³ the Court disagreed with the Commission’s definition of voices because “...it did not adequately explain its decision to include only broadcast stations as voices.”¹⁴ There are both merits and concerns in supporting the arguments set forth by both the Commission and the Courts. Defending the FCC’s approach seems to imply that *only* broadcast stations serve as meaningful voices for disseminating news and entertainment content. By contrast, the defending the Courts’ position is more complex because it seems to assert that: 1) all voices are weighted equally; 2) there is a meaningful degree of substitutability among media from the point of view of both consumers and advertisers; and 3) all media equally serve the same purpose in a local market. We believe that perhaps a broader definition of voices within the local video media market should be considered to include outlet type, relevant product market and substitutability from the perspective of advertisers and consumers. Additionally, a broader voice definition might include low-power TV stations. Due to their hyper-local nature, LPTVs serve needs for certain consumers and advertisers that might not otherwise be fulfilled.

¹² *Sinclair Broadcast Group, Inc. v. FCC*, 284 F. 3d 148 (D.C. Cir. 2002).

¹³ Notice, ¶ 17.

¹⁴ *Op. Cit.*, p.8.

First, it seems plausible to make a case for considering video media consisting of broadcast and cable programming networks as a distinct from other media. While Joel Waldfogel's study entitled "Consumer Substitution Among Media"¹⁵ on the substitutability between local TV, radio and newspapers seems to find some degree of substitutability between local media for information and content consumers, we believe this may not be entirely true when consumer context is taken into account. We should therefore look at video media as a distinct component of the local media landscape where local TV rules are concerned. Further, within video media, broadcast and cable serve distinct groups of consumers in both the type of media content they provide and consumers' ability to access these media.

A distinction between cable and broadcast with their respective functions in terms of the content markets they serve must be made. TV stations, as opposed to TV networks, are charged with clearing both national, i.e. network, content and local content. National content, carried into the local market from national TV networks by both network owned stations and affiliated stations consists of entertainment and news programming *tailored to and to be consumed by a national audience*. Local content, on the other hand, is cleared entirely by local stations and is only intended to be consumed by the local audience of a given DMA. This is especially true of news, local-interest

¹⁵ Waldfogel, Joel, "Consumer Substitution Among Media," FCC Media Ownership Working Group, Staff Study No. 3, September, 2002.

information programming and local advertising. The local weather forecast or mayoral race in Anchorage, Alaska is of little interest or value to viewers or advertisers in Brownsville, Texas, for example. Rarely is entertainment programming a meaningful part of local content.

Cable, by contrast, is almost entirely a national medium *from a content perspective*. It is important to point out the difference between cable systems and cable programming networks. While cable MSOs maintain a local presence through clusters in local markets, they are merely distribution outlets or “pipes” for the content they carry which is almost entirely acquired from the national cable programming networks. Any local content, especially news, originates from the local broadcast stations and is carried by cable. There are a few notable, rare exceptions. New York 1, owned and carried by Time Warner, is a cable channel devoted exclusively to local news programming in the New York area. However, in most instances, cable cannot be considered a meaningful local voice since it does not provide a unique or original voice for local content, especially where news and information programming are concerned. From the perspective of entertainment programming, cable and broadcast are much closer substitutes since most entertainment content is consumed by both local and national audiences. Further, much of what airs on cable originated on broadcast network television. Perhaps the relevant policy prescription would accommodate a voice definition that includes both cable and broadcast (and ultimately, DBS) as voices for clearing video entertainment programming while voices for news and

information programming, would be determined by the number of video outlets offering a local news cast, whether cable or broadcast.

1.3 Programming Access

We now address programming access and broadcast ownership. The danger of counting broadcast stations and cable, and to some extent DBS, as substitutable voices, even after adjusting for content type as discussed above, is that there will still be a portion of the population left out of information flows due lack of access. Over-the-air TV has historically been a free-access medium. Its cost is supported by advertising fees paid by firms wishing to sell products to consumers, but not by consumers themselves. Cable and DBS are pay media supported by both subscription fees and advertising. While fees for basic cable service, which includes the broadcast networks, independent stations and public television, are regulated by the FCC, they still represent a cost to consumers which may prevent access to information for the poorest of society. Further, some rural communities are not passed by cable or DBS and would therefore be without access to a vital, real time source of news and information. According to Media Mark Research in Fall 2002, the US median household income for cable and DBS subscribers was \$55,671 as opposed to \$33,399 for those who access video programming on over-the-air TV, representing an income disparity of 40% between the two groups. Additionally, only 79% of US TV households have cable access and an even smaller percentage access video media by DBS. For these consumers, there is no substitutability between video media. Given the

foregoing, it seems that the level of access should also be considered in addition to number and type of voices in local TV markets when considering ownership concentration. In both large and developed markets as well as in small and less developed ones, it seems defensible to protect some minimal level of free TV access and number of voices, which would ensure adequate diversity of viewpoints, especially where news is concerned. We fear that the trend toward a fee-based model for access to content will lead to an “Information Divide” causing the most underprivileged of society to be left out of information flows.

1.4 Low-Power TV

Low-power TVs have not been traditionally considered in the eight-voice test. In the context of a broader definition of voices, some value may accrue to including these stations as voices as they serve local needs which might otherwise go unfulfilled. These stations may serve as substitutes for other local media for some advertisers and consumers. For example, a station with a signal footprint that covers only a section of a town could serve as a substitute for a local advertiser who wants to reach a very narrowly defined demographic but would otherwise be likely to pay much higher ad rates at a local full power station. Similarly, a low power station serving a university might also serve the same purpose for students of that university wishing to access information relevant to their student communities.

The establishment of this type of broadcast license was instituted by the FCC in the early 1980s for the purpose of lowering local concentration as well as providing more outlets for local programming and increasing minority ownership of broadcast outlets. These stations are hyper-local by nature since they have much smaller signal footprints ranging from 5 to 20 miles, as compared to 65 miles for a full power VHF stations and are often owned and operated by universities and other groups who have limited representation in media ownership. Although the Commission's original goal was to provide more local programming and minority ownership through the issuance of LPTV licenses, this has largely not been achieved. In 1995, only 13% of LPTV stations were owned by minorities, mostly Native Americans on reservations,¹⁶ and this share dropped further to 3.5% by 2000.¹⁷ In addition, at least in 1993, only 30% of LPTV licensees offered local programming.¹⁸

Since in some markets more networks seek affiliates than there are VHF and UHF stations, LPTV stations have become, in some cases, building blocks for the newer broadcast networks. In 1995, LPTV stations accounted for 14 of WB's 100 affiliates, 11 of UPN's 150 affiliates, and four of Fox's 200 affiliates.¹⁹ LPTVs in some instances serve local needs that might be overlooked by more

¹⁶"Take it to the Banks," *Communications Daily*, January 26, 1996, p.2.

¹⁷ "Changes, Challenges, and Charting New Courses: Minority Commercial Broadcast Ownership in the United States", *NTIA* - December 2000

¹⁸ Noam, Eli, *Ownership and Concentration in the US Communications Industry*, MIT Press, forthcoming.

established networks or station groups. For example, Telemundo, the second largest Spanish television network and station group in the US, has 12 LPTVs (out of a total of 24 stations) including three in Santa Barbara, a community with a large Spanish-speaking population which would otherwise have fewer outlets that provide news and entertainment and would thus risk being left out of information flows which all citizens should have the right to access in order to make informed decisions about their welfare.

As of the FCC's September 30, 2002 national TV station count, LPTVs outnumbered full-powered stations at 2,127 and 1,714 respectively. While it would seem that including these stations in a broader voice definition would further the Commission's original goal of lowering local concentration, this is problematic from the in view of these stations' inferior competitive position relative to full-power stations. As described above, their signal footprints are far smaller than those of full-power stations and therefore their ability to achieve ratings and ad rates competitive with full-power stations is significantly reduced. From a revenue market share perspective, the Department of Justice's traditional metric for measuring concentration, it would not be appropriate to count LPTVs in the same category as full-power stations, but from the perspective of content provision, it may be an appropriate framework for measuring viewpoint diversity and localism. We suggest that if a broader definition of voices is advanced that

¹⁹ "Network TV's new low-powers that be: new networks are using LPTV stations to build carriage, although some say solution is simply interim step; low power television stations,"

includes LPTV, it ought to be based on viewership within the relevant local market. In so doing, even with a greater increase in the number of outlets in a local market, the concentration figure is unlikely to be greatly affected. As a result, many of our concerns regarding information flows in local markets would obtain assuming a new definition of an independent voice.²⁰

Broadcasting & Cable, September 11, 1995.

²⁰ Cooper, Mark, "Democratic Discourse in the Digital Information Age: Legal Principals and Economic Challenges at the Millennium," January 2003.

2 Media Substitutability among Subscribers, Viewers, and Listeners: The Relevance of Geography and Content

As the Commission correctly points out in its *Notice*²¹, there are two groups of consumers for media products and services – advertisers and subscribers/viewers/listeners (hereafter content consumers). While both groups are important to media firms – for instance, a typical cable network²² derives one-third of its total revenue from subscribers and two-thirds from advertisers – media firms provide distinctly different functions for each. Specifically, content consumers access different media as important sources of information and entertainment, while advertisers access media firms for purposes of promoting their products, services, or brand. These distinctly different relationships - between media outlets and the two categories of consumers- have important consequences that must be accounted for when measuring the substitutability of the different media for each of the two groups.

The FCC's Media Ownership Working Group paper #3, titled "Consumer Substitution Among Media," examines the important question of "whether the changes in availability of some media have brought about changes in the availability or consumers' use of other media, or whether different media serve

²¹ In the matter of 2002 Biennial Regulatory Review - Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MB Docket No. 02-277; Cross-Ownership of Broadcast Stations and Newspapers, MM-Docket No. 01-235; Rules and Policies Concerning Multiple Ownership of Radio Broadcast Stations in Local Markets, MM Docket No. 01-317; Definition of Radio Markets, MM Docket No. 00-244: Notice of Proposed Rule making

as substitutes for one another for information consumers."²³ Unsurprisingly, Waldfogel finds some degree of substitution among various media for information consumers as well as entertainment consumers. In terms of news or information, Waldfogel finds evidence of substitution among Internet and broadcast TV, daily and weekly papers, between daily newspapers and broadcast TV, between daily newspapers and cable TV, between radio and broadcast TV, and finally between the Internet and daily newspapers.

At first blush, the picture painted by Waldfogel seems to demonstrate a high degree of substitutability among multiple media channels. Indeed, as a result of these findings, Waldfogel asserts that "...we can reject the view that various media are entirely distinct."²⁴ There are, however, several problems with inferring this conclusion. First, consumer context is not accounted for in Waldfogel's study. That some degree of substitution for information across multiple media exists is trivially true. We would posit, however, that an information consumer driving a car or taking a shower would find a newspaper or television news program an effective substitute. Second, the degree of substitution for information is likely to be overstated as much of the content on a

²² FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Seventh Annual Report." P.15. www.fcc.gov.

²³ Waldfogel, Joel. "Consumer Substitution Among Media," *Federal Communications Commission, Media Ownership Working Group*. September 2002. Waldfogel advances the concept of "information consumer" to help clarify between the two features media providers offer subscribers/viewers/listeners – essentially news or information on the one hand, and entertainment on the other. In this paper, the term "content consumer" refers to subscribers/viewers/listeners of media providers for both information and entertainment.

²⁴ *Op. Cit.* Page 3.

single media often times is repackaged content derived from another media. Newspaper headlines are often read over the radio, on morning television programs, and whole articles written for print newspaper are posted on the Web with increasing frequency. This is particularly true with respect to local news. As a result, the impact of the elimination of a local newspaper will have repercussions well beyond just the print news media. Third, different types of news and information display a greater degree of time sensitivity than do others, thereby constraining the media through which they can be transmitted. Local traffic reports and breaking news are best transmitted over radio and broadcast television (and to a lesser extent the Internet). Yesterday's traffic conditions are of little interest in a daily newspaper.

For these reasons, it is important to emphasize Waldfogel's further conclusion that there is insufficient evidence to demonstrate that all media should be considered substitutes for news and information purposes, even to a limited degree. As a result, when the Commission seeks to define the number of independent voices in a given market, evidence from its own Media Ownership Working Group suggests that it must do so along at least four contours. These contours include two geographic criteria (whether the relevant market is local or national), and two programming criteria (whether the content pertains to news and information, or entertainment). Employing an approach that considers at least these dimensions could yield interesting and counterintuitive findings. For instance, a smaller local market could possess a moderately competitive radio

market with diverse programming, and could be served by several daily and weekly newspapers, have two or more cable providers, DBS service, access to the Internet and broadcast television. Using a modified broader definition of voices, this would seem like a vibrant and robust media market. If, however, the larger radio stations were owned by major station groups or networks that provided only regional or national news, and the daily newspapers were a combination of regional papers or national papers with little or no local news reporting, and the broadcast news programming transmitted over both cable networks and the airwaves contained only news reporting from the largest regional newscaster, it is possible that this community might be entirely devoid of all but the most cursory of local news reporting.

The strength of Waldfogel's analysis is his discussion of the impact of the substitution of non-local media for local media upon the civic behavior of information consumers. Waldfogel observes that "if substitution were complete, then the decline of local daily newspapers will be offset by increased use of other media."²⁵ He goes on to suggest that, with complete substitution, "the civic behaviors affected by media consumption will also be unaffected by changes in the availability or use of any particular medium."²⁶ He terms this phenomenon "behavioral neutrality." Citing his own previous research, Waldfogel concludes that, even if substitution operates, it is not complete in terms of behavioral

²⁵ *Op. Cit.* Pg. 40.

²⁶ *Op. Cit.* Pg. 40.

neutrality. Where local media products are unavailable, Waldfogel argues, small groups substitute non-local media. This impacts the behavior of those groups in non-neutral ways – for instance, lowering the participation rates in local (non-presidential) elections.

Although he condemns his conclusion as “conventional and trite,” the uncertainty created by his research, and the significant consequences of drafting policy based on incomplete information and indeterminate analysis, a call for additional research is warranted. The Information Policy Institute wholeheartedly endorses this conclusion.

3 Media Substitutability in Local Advertising: Cable TV in Boston

In our examination of pricing of local cable television advertising spots in the Eastern Massachusetts and Southern New Hampshire region, we found little or no responsiveness to changes in local newspaper advertising rates during the period from 2000 to 2002²⁷. Not only did local cable television ad spot providers not change their prices in response to increases in newspaper advertising rates, but instead reduced the supply of local ad spots available to local businesses. Furthermore, we found no correlation between local broadcast television ad rates and local cable television ad rates. Rates per 1000 viewers for local cable television ad were unrelated to local broadcast television ad rates even when controlling for household income of regions.

We examined rate cards and not actual rates, and the examination was based on descriptive statistics rather than rigorous econometric analysis with larger data sets. Despite these limitations, there are good reasons to believe that our conclusions are highly suggestive. These tentative findings are in keeping with the results of C. Anthony Bush's study of the substitutability of local television, radio and newspaper advertising.²⁸ He found weak substitutability between the three media. Bush's results suggest that at the local level - at the level of sales of local advertising to local businesses - radio and newspapers are

²⁷ For a thorough discussion of these characteristics for the three media examined by Brown and Williams, as well as cable TV, see Appendix A.

weak substitutes. Newspapers and television, on the one hand, and radio and television, on the other, were found to be complements.

The intuitive conclusion is that if local newspapers and local broadcast television advertising are not substitutes, it is likely that local newspaper and local cable television advertising are not substitutes as well. More rigorous studies aimed at assessing whether, and to what extent, local cable television (and direct mail and other) media compete for advertising are required. But our cursory examination of local cable television advertising suggests that this market faces only weak competitive pressures from other local media.

It is worth noting here that a tension exists between Bush's findings, and those contained in the Brown and Williams' study "Consolidation and Advertising Prices in Local Radio Markets."²⁹ The Brown and Williams study only focuses on substitutability of three of the larger local media – newspaper, radio, and broadcast TV – without addressing cable TV or other advertising media. Despite this limitation, and the fact that the data used by the study's authors is extremely simplified (single daypart for each medium), we are informed that TV, radio, and newspapers are not substitutes for one another from the perspective of local advertisers. Although we would generally agree with this finding, the

²⁸ Bush, C. Anthony. "On the Substitutability of Local Newspaper, Radio and Television Advertising in Local Business Sales." *Federal Communications Commission, Working Group on Media Ownership Paper #10*. September, 2002.

approach employed in the Brown and Williams study ignores the more salient characteristics that govern the desirability of using a particular medium (or combination of media) for local advertising.³⁰ For local advertisers, substitutability among various media is the result of equivalent communication for an equivalent price. Radio and newspaper do not possess the combination of video, audio and text that is possible with broadcast and cable TV. As the Commission gives further consideration to media ownership rules, measures of substitutability among media that collectively comprise a local advertising market must address these pronounced differences in functional attributes. By so doing, a more accurate picture of the relevant product and geographic market should emerge.

Finally, to the extent that the findings in Bush's study are robust (and some are contradicted by Ekelund et al's studies), it presents greater puzzles for the Brown and Williams paper. Bush finds that there is at best weak substitutability (and in fact complementarity between local television ads and local newspaper ads and also local radio and television - though more weakly so) among the three media. To this extent, the downward pressure on prices from national concentration remains identified in the Brown and Williams study

²⁹ Brown, Keith and George Williams. "Consolidation and Advertising Prices in Local Radio Markets," *Federal Communications Commission*, Media Ownership Working Group. September 2002.

³⁰ See Appendix A.

becomes a puzzle, since it suggests that the local markets are distinct by medium.

The Bush analysis should be extended using more DMAs. Furthermore, the data (or types of data) used by Bush should be utilized in Ekelund's model if possible. Bush claims that Ekelund's findings follow from the limitations of his data, his inability to distinguish between national radio (television) buys and local radio (television) buys within a DMA. Again, to the extent that different advertisers (national vs. local) face different concerns and have different objectives for advertising, and given that advertisers can price non-linearly, Ekelund's model perhaps should be tested using more differentiated data.

4 Concentration and Local Radio Advertising Rates: Economic Growth May Obfuscate Impact

This section focuses on FCC Media Bureau Staff Research Paper 4, titled “Consolidation and Advertising Prices in Local Radio Markets.” Specifically, we raise questions about the study’s central finding, namely, that the vast majority of the increase in real advertising rates from 1996 to 2001 (rates increased by 68 percent) is due to economic growth, while only a very small portion is attributable to increases in local concentration (3-4 percent).

Although strong demand during much of the period analyzed undoubtedly accounts for much of the increase in advertising rates, we think the study’s findings must be interpreted very cautiously.³¹ First, the data set on prices used in the regression has only prices paid by national and regional advertisers. Thus, it excludes the prices paid by local advertisers – the very advertisers one might believe would be most affected by increases in concentration. The study’s authors recognize this important limitation: “The rates paid by local advertisers likely differ from the rates paid by national and regional advertisers.”³² If this is so, this study does not truly address the effect of concentration on price.

³¹ In fact, in correspondence and conversations with various advertising agency executives, this finding was consistent with their experience in the market.

³² Brown, Keith and George Williams. “Consolidation and Advertising Prices in Local Radio Markets,” *Federal Communications Commission*, Media Ownership Working Group, Media Bureau Staff Research Paper #4. September 2002. Pg. 7.

In particular, it is reasonable to think that national and regional advertisers are more likely to buy from national radio chains in order to avoid having to make separate purchases for every market in the country (indeed, Clear Channel Communications is counting on this). If this is the case, then national and regional advertisers are likely to be more affected by national concentration than by local concentration. However, national concentration indices are much lower than local concentration indices. For instance, our analysis of the top 10 radio markets in 2001 shows an average HHI score of 1,992 (on the cusp of being highly concentrated according to the DOJ's *Mergers Guideline*), and an average C4 of 78.6. In other words, the four largest stations in each market account for nearly 80 percent of the market's total revenue (see **Appendix B** for a complete analysis of concentration measures for each of the top 10 radio markets).³³

As a result, even though the national concentration indices increased substantially during the period covered by the study, it is not surprising that concentration levels are not yet high enough to have any appreciable effect on prices. In contrast, the level of concentration in the local radio markets is high enough to suggest a possible effect on prices – but to test for the effect of such concentration the study would need to have the prices paid by the local advertisers which are precisely the ones tied to the local market.

³³ All data sourced from Duncan's American Radio – Duncan's Radio Market Guide: Supplement

Second, as with all regression analysis, the findings are most robust for predictions inside the range of the independent variables. But if media ownership becomes much more highly concentrated than in the observations fitting the regression, it is uncertain that the regression will yield valid predictions of advertising prices for this range of concentrations. Thus, it is not clear that the study has a strong bearing on the issue of how advertising prices would behave with the high concentrations of media ownership that might result from a further relaxation of regulatory restrictions.

In the same vein, it is also important to note that the period covered by the study was one of robust economic growth with strong demand for advertising, which could have affected the nature of competition between radio stations. In a context of rapid growth in demand, large advertising price increases were possible without resorting to the tacit collusion and supply restrictions that can result in a highly concentrated market. However, the effects of concentration may well show themselves in a weaker economic environment with lower demand for advertising, when radio stations are no longer able to rapidly increase advertising prices. In that scenario, we may well see advertising prices falling in markets with low concentration but staying steady in markets with high concentration. Thus, the effects of concentration during the high-demand period of the study may not provide good evidence of the effects of concentration a low-demand period.

Third, the paper does not discuss sensitivity analyses or discussions on how robust the results are to changes in functional form or changes in input variables. There is no *a priori* reason, for example, to use a log linear form in estimating the regression coefficients. Would a different form have found a larger effect of concentration on price? We could be much more confident in the results if they were robust to changes in functional form or input variables.

Taken together, then, the study's data deficiencies and methodological questions limit its policy relevance regarding the impact of radio concentration upon local advertising. With that said, however, several important findings do drop out of the Brown and Williams analysis – notably, the downward pressure on advertising prices exerted by increased consolidation in the national and regional radio advertising markets. Again, however, the conclusion that increased concentration only contributes marginally to the substantial observed increase in advertising rates is tenuous, as local data is not presented and the period examined was one of relative economic growth, which may obfuscate the full impact of concentration on advertising rates. As a result, both of the study's primary conclusions may be more coincidental than predictive or representative.

5 Broadcast Media Concentration and Advertising: Analysis and Critique

This section analyzes the FCC's paper "A Theory of Broadcast Media Concentration and Commercial Advertising," completed by members of the Working Group on Media Ownership.³⁴ The paper derives a fairly standard microeconomic model of consumers, advertisers, and broadcasters to describe and discuss the effects of an increase in concentration on some important variables - including the fraction of time broadcasters devote to programming and to advertising, the amount of time they devote to the two activities, the price of advertising, and the profitability of these activities. While we did not spend sufficient time to be able to confirm that the entire derivation is error free, we did follow the model's general construct and flow and found nothing obviously wrong.

Three very interesting findings drop out of the model. In two of the three cases described, the profit maximizing response of broadcasters to increasing concentration in the broadcasting industry, is to increase the fraction of time they devote to advertising. These findings are highly contingent, and are predicated upon *ex ante* assumptions about consumer behavior. For instance, because consumers can react in different ways to the increasing fraction of time devoted to advertising, the total amount of advertising could increase or

³⁴ Cunningham, Brenda C. and Peter J. Alexander. "A Theory of Broadcast Media Concentration and Commercial Advertising," *Federal Communications Commission*, Media Ownership Working Group. Media Bureau Staff Research Paper #6. September 2002.

decrease. An increase in the total amount of advertising would be associated with a decrease in advertising's unit price, while a decrease in the total amount of advertising would be associated with an increased unit price. In the third case described, increasing concentration in the broadcasting industry results in a reduction of the fraction of time devoted to advertising and an increase in its unit price.

In other words, as the broadcasting industry becomes progressively concentrated, decisions about the fraction of time allocated to advertising and advertising rates, will be increasingly impacted by the behavior of a small number of firms. These firms will soon realize their influence as "price-makers" and can be expected to adjust their behavior in a manner designed to maximize their rents. In this case, firm-level rents can be maximized by restricting supply (fraction of time allocated to advertising) and increasing prices (advertising rates.) This outcome will have several effects. First, increased ad rates will either be absorbed by the shareholders of advertisers (reduced dividends, lower stock prices, etc.), or more likely, will be passed along to consumers in the form of higher prices.

While some consumers may be made better off by this development (those who value the decrease in advertising more than the marginal increase in product prices resulting from higher advertising rates), many categories of consumers will be made worse off. First, all consumers who value the decrease

in advertising less than the increase in product prices, will be made worse off as a result of having to pay more for the same basket of goods and services as a result of increased media concentration. Second, increased advertising rates may erect a barrier to small businesses or newly created firms with limited resources for marketing and advertising. For some of these firms, broadcast TV may have been the optimal medium for reaching their customer base. Given the prohibitively expensive advertising rates that could obtain in a highly concentrated market, small businesses and new entrants may be forced to utilize other more affordable advertising media.

Under this scenario, consumers lose on two accounts. First, they obtain less information about the full range of choice available in the marketplace, and consequently make suboptimal decisions based on incomplete information. Second, because higher advertising rates present barriers to entry in broadcasting favoring larger firms and entrenched interests, the dampening effect on competition from economic entry barriers to broadcast advertising enables these firms to charge ever-higher prices.

The authors of this study also present a formal model developed to assess the potential impact of various ownership structures (e.g. monopoly, oligopoly, competitive) in which they find theoretical quantitative results for important variables such as total advertising consumed, total broadcast time consumed, prices and quantities of advertised products sold, and total consumer welfare.

The results for the aforesaid variables depend upon input parameters including the number of firms, income, utility of advertised goods and other goods. In the example presented, as the number of firms increases, so too does consumer welfare. Furthermore, an increase in the number of firms yields a decline the price of advertising. The results seem unimpressive; the choice of value for the parameters does not seem to be well motivated.

To begin with, the study's authors didn't explain the criteria used to select the parameters that yielded the indicated results. Absent this explanation, it is extraordinarily difficult to ascertain whether the values they selected for the parameters are very likely, plausible, unlikely, or virtually impossible. Thus, it is impossible to say with any degree of confidence whether there are any real-world implications for these results. In this regard, we are not encouraged by the validity of the selected values based upon our conversations with senior executives from several advertising agencies.

After analyzing the Cunningham and Alexander paper (as well as several others pertaining to advertising) one agency executive remarked "... the studies are inconclusive and frequently contradictory. They are written from a purely economic point of view and are based upon hypotheses, modeling techniques, and variables that are highly theoretical and not representative of real-world media and marketing factors. I realize that simplification is often required to reduce the scope of research to a manageable 'problem.' Over-simplification

results in a questionable exercise. 2002-6 [Cunningham and Alexander] is pure economic conjecture ... This conjecture is then subjected to various 'mathematical' manipulations and arrives at a 'coin-toss' conclusion that consolidation can either increase or decrease the time allocated to programming [we assume, at the expense or benefit of time allocated to advertising]. No new learning or insight was provided due to the omission of more relevant real-world variables, nor was any position taken or rationale given as to which of these outcomes might actually occur."³⁵

Nonetheless, they show that for at least in some situations, increasing concentration is bad for consumer welfare and for advertising prices.

³⁵ Written comments from senior advertising agency executive to Donna Campbell, Vice President, Media Services at the American Association of Advertising Agencies. November 1, 2002.

6 Regulatory Regime Change: Lessons from History

The FCC has stated that the Courts' interpretation of Section 202(h) of the 1996 Telecommunications Act carries with it a presumption of change. This Commission seems to agree with this interpretation based on two observations. First, the media and communications industries over which it has jurisdiction are technologically dynamic. By extension, the FCC reasons, the best regulatory structure for these industries is not one that is rigid and static, but rather one that is flexible and continually evolving.

Second, dynamic industries are often characterized by innovative competition rather than price competition. In mature (and less dynamic industries) competition among providers of goods and services (and their close substitutes) usually involves product and brand differentiation, as well as differences in price. This is competition *within* a market. In technologically dynamic industries, such as today's media and communications industries, firms seek to innovate whole new products or ways of doing things that may fundamentally redefine an extant market. This scenario, by contrast, is competition *for* a market. Under these conditions, it is not unusual for a successful firm to temporarily dominate a market. In such cases, a highly concentrated market is the just reward to an innovative firm for entrepreneurial

vision. Indeed, U.S. antitrust law takes great pains to avoid unfairly punishing innovative firms by denying them the fruits of their labors.³⁶

In its *Notice*, the Commission seems to be implying that current media ownership restrictions are denying innovative media and communications firms their just rewards in the market. By substantially relaxing, or even eliminating national and local ownership restrictions, the FCC infers that a more equitable environment – one that is more highly conducive to continued innovation – will obtain. While not overtly defending this position, the Commission does raise the question of whether this is theoretically possible.

The Commission approaches this theoretical puzzle from a unique angle. They advance the question of whether innovation ought to be included among its policy objects along with localism, diversity, and competition. By framing the question in this manner, they divorce the concept of innovation from a particular market structure (in this case, competition). In addition, the Commission asks how it should rank its policy objectives should there be tension among them. By so doing, it becomes possible to subordinate one objective, say competition, for the sake of achieving another, innovation for instance. This opens the door to permitting both vertical and horizontal concentration within the media and communications industries on the grounds that further innovation requires

³⁶ Bork, Robert H. *The Antitrust Paradox: A Policy At War With Itself*, New York, The Free Press, 1978.

certain economies of scale or scope that simply do not exist in a fragmented or highly competitive market.

Indeed, this is a restatement of the classic interpretation of the “Schumpeterian hypothesis,” namely, the claim that a market structure involving large firms with a considerable degree of market power is the price that society must pay for rapid technological advance.³⁷

This hypothesis has some important caveats with significant policy implications. First, the relationship between market structure, R&D spending, and technological progress (a narrow definition of innovation) involves a myriad of ill-understood and understudied, complex interactions. For example, to the extent that a competitive market structure serves to winnow out firms that consistently make bad decisions and reward those that make good decisions, some degree of competition in a given market is conducive to technological innovation.

Second, the bulk of Schumpeter’s discussion about innovation in *Capitalism, Socialism, and Democracy* emphasized certain advantages of firm size, and was not focused on market structure *per se*.³⁸ As Nelson and Winter point out, Schumpeter’s discussion of the “monopoly level of organization” addressed particular innovation advantages that were “capability advantages” of

³⁷ Nelson, Richard R. and Sidney G. Winter. *An Evolutionary Theory of Economic Change*. Cambridge, The Bellknap Press of Harvard University, 1982. Pg. 278.

³⁸ *Op. Cit.* Pg. 279.

large firm size stemming from economies of scale in R&D and management, greater capabilities for risk spreading, finance, and so on.³⁹ Large firms, then, possess certain capacities enabling them to quickly exploit an innovation over a relatively short period of time. Where patent protection is spotty, and imitation occurs rapidly, the payoff to the innovator will depend upon its ability to do so. However, certain issues of internal control and organization provide a powerful rebuttal to this argument. A firm's bureaucratic decision-making structure could offset many of the innovation advantages inherent in a firm's size.

Here it is important to note that what is required for innovation in Schumpeter's theory is firm size and not market power. While it may be the case that a specific innovation requires a minimum scale of efficiency that only a monopolist or duopolist can achieve, Schumpeter does not argue that market power in itself is important to induce innovation. On the one hand, weak competition or the absence of competition, by allowing high rates of return, shelters firms that investment in R&D that, under conditions of heightened competition, may be driven out of business by emulators and imitators. In other words, it is conceivable that, under certain conditions, less competition may provide a greater incentive to invest in R&D, which, in turn, hopefully leads to greater innovation. On the other hand, the absence of competition does not guarantee that firms will invest in R&D nor does it provide the assurance that

³⁹ *Op. Cit.* Pg. 279

such activities, if undertaken, will be done well.⁴⁰ Indeed, absent the pressures associated with competition, the incentive to invest in innovative R&D may be substantially diminished.

It is certainly commendable that the Commission is considering the issue of innovation, whether it should become a policy objective, and the relationship between innovation and market structure. In the context of the media and communications industries successful innovation has kept many U.S. firms at the forefront of competition for the past 125 years. However, before making any decisions regarding modifications to current ownership rules, the Commission should more closely examine the interaction between innovation and market structure.

While the Commission seems to be suggesting a unidirectional relationship between the two variables, in reality, the cause-effect arrows point in both directions. As was discussed above, while firm size may enable many “capability advantages” conducive to innovation, these may be offset by internal control and managerial disadvantages inherent in large firms. Furthermore, to the extent that the market serves as an experimental lab for different products, arrangements of resources, and methods of production, some degree of competition is necessary to reward the innovative and winnow out the laggards. To the extent that the Commission characterizes the media and communications

⁴⁰ *Op. Cit.* Pg. 280

industries in the U.S. as highly dynamic and innovative, this suggests that current (and past) ownership restrictions have not hobbled innovation, but have instead successfully encouraged and driven innovation. An examination of the market share of innovative firms in new lines of business over the past 20 years is indicative. The experiences of Intel, Cisco, Microsoft, and a host of other truly innovative firms clearly demonstrate that innovators are receiving their just rewards.

For two primary reasons, it is curious that the Commission has chosen to justify the rollback of media ownership rules based upon the notion of technological dynamism. First, to the extent that the so-called “Information Revolution” has spawned myriad significant technological innovations, existing ownership rules have not presented any meaningful impediments to innovating. Second, the basket of technologies core to the industries over which the FCC has jurisdiction are, in most cases, relatively mature (See **Appendix C**). The telephone is 126 years old, radio is nearly a century old, microwave communication is nearly 60 years old, mainframe computers are 50 years old, microcomputers are 40 years old, satellite communication is 40 years old, the microprocessor is 30 years old, the Internet is more than 30 years old, desktop computers are over 20 years old, and even the World Wide Web is now approaching its 10th birthday.

By almost any measure, then, the bulk of the basic innovations that undergird the media and communications industries were well-developed, mature technologies at the turn of the twenty-first century. While several of these significant innovations were conceived in monopoly firms, in such cases the introduction of commercial applications of these innovations was forced by government intervention. For instance, the landscape of the U.S. computer industry would likely have been very different had it not been for the 1956 AT&T consent decree, forcing the telecommunications monopoly out of the computer industry all together. One is also left to wonder whether the long distance telephony industry, the wireless communications sector, the telephone equipment manufacturing sector and other dynamic sectors would have evolved so rapidly, and to the benefit of consumers, had it not been for various ownership regulations.

In short, the track record of media and communications firms with substantial market power (that is, the power to affect the prevailing price of products and services, as distinguished from simply earning a substantial amount of annual revenue) does not yield any evidence to support that notion that “innovation” will be enhanced by a relaxation of existing ownership rules.

7 Relationship between Viewpoint Diversity and Ownership: A Cursory Examination of Minority-oriented Programming in the U.S.

The theory underlying much of the Commission's rationale toward abandoning, or at least substantially relaxing, its decades-old practice of promoting viewpoint diversity through structural regulation was first articulated 50 years ago by economist Peter Steiner.⁴¹ In this seminal work, Steiner advanced a formal model explaining the programming decisions of an ad-supported broadcasting industry with relatively few channels.⁴² Steiner used his model to conclude that programming provided by ad-supported broadcasters would likely be biased toward the types of programs *preferred* by the majority of viewers, and away from those preferred by those with divergent tastes.

It is critical to underscore that Steiner focused on consumer preference, in this case consumer tastes for programming content. Consumer preferences were explicitly not linked to any demographic criteria. This distinction is critical, as discussed below.

Steiner's basic argument is that if the subset of viewers with minority preferences is relatively small, and the number of stations is similarly limited, then broadcasters will make programming decisions geared to appeal to the

⁴¹ Steiner, Peter O., "Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting", (1952) 66 *Quarterly Journal of Economics* 194

majority viewers in order to maximize advertising revenues. As a result, minority programs are likely to be undersupplied relative to majority programs. Steiner's theory also holds that as the number of channels increases, there is an economic incentive to diversify programming. This from the fact that the majority viewers have been fragmented across competing channels to such an extent that a channel dedicated to minority viewers becomes economically profitable.⁴³

It was for this reason that cable television was believed to be a powerful vehicle leading to greater viewpoint diversity. Subscribers, it was argued, would be able to directly express their programming preferences through subscription payments that would offset the programming biases of ad-supported broadcasters.⁴⁴ Undoubtedly, this has been the case, but to a degree that fell far short of initial expectations. This is so for two primary reasons.

First, as has been well documented, to the extent that substantially more revenue is generated from the sale of majority programming than minority programming, there will be an oversupply of majority programming relative to

⁴² Steiner's work was oriented toward radio, the dominant communications medium during the period he crafted his ideas. Broadcast television had relatively low household penetration rates during the early 1950s, and cable television and satellite broadcast television were decades away from becoming viable mass media channels.

⁴³ For an excellent discussion of Steiner's theory, see Wildman, Steven S. and Theomary Karamanis. "The Economics of Minority Programming," *Communications and Society Program*, Northwestern University. A similar argument is advanced in Peter Siegelman and Joel Waldfogel, "Race and Radio: Preference Externalities, Minority Ownership, and the Provision of Programming to Minorities. December 28, 1998.

⁴⁴ *Op. Cit.* S. Wildman and T. Karamanis.

the demand, and minority programming will continue to be undersupplied.⁴⁵

Second, basic cable networks accounting for a majority of cable viewers derive a substantial portion of their revenues from the sale of advertising avails (as much as two-thirds of their total revenue in some cases). As a result, the bias in advertiser support will still be evident in their programming decisions.

Steiner's theory also assumed that all viewers are equal (that income and other descriptives were immaterial), and that all programs cost the same. In the real-world, we know that advertisers do not value all viewers equally, and, ergo, neither to media executives making programming decisions. As those with higher net disposable incomes possess a greater capacity to consume, wealthier individuals are typically valued more by advertisers. Similarly, those with greater assets are also better positioned to be able to afford paid programming, such as cable TV, DBS, Web content, etc.

As Wildman and Karamanis have argued, assuming that majority and minority preferences for programming correlate with ethnicity, and that – as Waldfogel and Siegelman have argued – preferences among these groups are definable and distinct, the bias against minority programming will be further

⁴⁵ 4. A. M. Spence and B. Owen, "Television Programming, Monopolistic Competition and Welfare," *Quarterly Journal of Economics*, 91:103­p; 126. See also, Steven Wildman and B. Owen, "Program Competition, Diversity, and Multi-channel Bundling in the New Video Industry," in Eli Noam, ed., *Video Media Competition: Regulation, Economics, and Technology*. New York, Columbia University Press, 1985.

exacerbated.⁴⁶ This follows from the positive correlation between ethnic minority status and below-average income. In ad-supported media, advertisers are willing to pay more for access to wealthier viewers (therefore, more programming oriented toward this group is supplied), and minority viewers are less able to pay for subscription based programming (especially premium packages) resulting in an undersupply of minority-oriented programming in both ad-supported and subscription-based media.

It has been argued that minority broadcasters (or cable network owners) confront the same economic incentive matrix as non-minority owners. As a result, assuming they seek to maximize profits, they are no more likely to provide minority-oriented programming than are non-minority owners. While it is possible that minority owners may be willing to sacrifice some level of profit to provide programming to traditionally underserved communities with which they are affiliated, or have certain other non-economic motivators that they value more than higher profit margins, there exists considerable empirical evidence

⁴⁶ P. Siegelman and J. Waldfogel. "Race and Radio." Siegelman and Waldfogel present compelling evidence that programming preferences between whites and minorities significantly differ, and that minority and white audiences comprise distinct [radio] markets. They also argue that the amount of minority-targeted programming is contingent upon the minority population. For an explanation of the underlying economic theory of why minority audiences are underserved, see Wildman, Steven S. and Theomary Karamanis. "The Economics of Minority Programming," *Communications and Society Program*, Northwestern University.

that minority broadcasters are more likely to provide minority-oriented programming than are non-minority broadcasters.⁴⁷

Matthew Spitzer has raised questions about the definition of minority.⁴⁸ While Siegelman and Waldfogel's recent work demonstrates that ethnicity is a meaningful criterion, it is possible that there are other criteria equally as useful when defining minority. Furthermore, to the extent that Steiner's theory is being used as a theoretical justification for relaxing media ownership rules, we suggest that the Commission give serious consideration to an alternative definition of minority based on other variables that may shape a homogeneous group preference. It is worth reiterating that in Steiner's theory, the concept of minority was decoupled from demographics, and pertained only to definable and distinct programming preferences.

An additional problem with too great a reliance on Steiner's theory is that the relationship between consumer preferences and programming is unidirectional – flowing from consumers to programming. This is a gross oversimplification of reality that overlooks a key dynamic influencing programming decisions. Consumer preferences are not static, and are heavily

⁴⁷ See: Dubin, Jeffrey A. and Matthew L. Spitzer. "Testing Minority Preferences in Broadcasting." California Institute of Technology Working Paper 856. July 1993; Spitzer, Matthew L., "Justifying Minority Preferences in Broadcasting," *Southern California Law Review*. Vol. 64 (1991), Pg. 293; Siegelman and Waldfogel (1998); Congressional Research Service. "Minority Broadcast Station Ownership and Broadcast Programming: Is There a Nexus?" (1988); Wildman and Karamanis.

⁴⁸ Spitzer, Matthew L., "Justifying Minority Preferences in Broadcasting," *Southern California Law Review*. Vol. 64 (1991), Pg. 293.

influenced by programming decisions. Given this, Steiner's theory implodes, as it is incapable of explaining the strategic behavior of a broadcaster using programming to develop preference-based audiences. In other words, in a concentrated media market, a media owner may engage in manipulative programming to build audiences around core majority programming rather than, as the Commission has suggested in its *Notice*, identify existing niche audiences based upon static identified consumer preferences. In this scenario, there is good reason to believe that minority programming preferences will be underserved or entirely ignored.

We encourage the Commission to reconsider and carefully weigh the existing and incontrovertible empirical evidence that ethnic minority groups have distinct programming preferences, that minority owners are much more likely to address these grossly underserved markets, and that other preference-based criteria for minority audiences may exist that would be best served through structural regulation (ownership caps). We are deeply concerned by suggestions that the Commission is prepared to disregard evidence regarding the success of decades-old regulations in favor of a new approach based upon a flawed, incomplete, and overly-simplistic theory.

8 National TV: The Spirit of National Ownership Rules

As with local TV, the Commission's stated purpose for regulating TV ownership nationally has been, and is, to promote competition and "...diversification of program and service viewpoints."⁴⁹ Based on the Commission's reasoning in the *1984 Multiple Ownership Order* that "...the relevant geographic market for considering viewpoint diversity is local, not national,"⁵⁰ it seems plausible that relaxing national ownership limits would not adversely impact local viewpoint diversity and competition as long as local ownership rules are sufficiently robust. Local markets, by nature, operate relatively independently of each other. Further, as the Commission rightly points out "...the area from which consumers can select the relevant mass media alternatives is generally the community in which they work and live, where radio and TV signals are available in discrete local markets..."⁵¹

8.1 The Commission's Position on National Ownership

In the *1984 Report* the Commission also concluded that "...the rule [national ownership] should be repealed because it focuses on national, rather than local, markets and thus has an insignificant effect on viewpoint diversity."⁵²

⁴⁹ In the matter of 2002 Biennial Regulatory Review - Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MB Docket No. 02-277; Cross-Ownership of Broadcast Stations and Newspapers, MM-Docket No. 01-235; Rules and Policies Concerning Multiple Ownership of Radio Broadcast Stations in Local Markets, MM Docket No. 01-317; Definition of Radio Markets, MM Docket No. 00-244; Notice of Proposed Rule Making, September 23, 2002 (hereafter, Notice) ¶ 126.

⁵⁰ Notice, ¶132.

⁵¹ Op. Cit.

⁵² Notice, ¶ 135, p. 44

Given the Commission's findings in the *1984 Report*, and that the Courts have interpreted that section 202(h) of the 1996 Telecommunications Act presumes change, it seems curious that the Commission would alter its position by retaining the national ownership rule in the in the 1998 Biennial report. The Commission has defended its cautionary stance in view of changes made to local ownership rules in 1999, taking a wait-and-see approach as many groups have acquired large numbers of stations nationwide. "The Commission stated that consolidation of ownership of TV stations in the hands of a few national networks would not serve the public interest."⁵³ In *Fox Television* the Court remanded the Commission's decision retaining national ownership rules in the 1998 Biennial Report as "arbitrary and capricious," arguing that the Commission had not adequately explained its deviation from earlier conclusions reached in the *1984 Report*.⁵⁴ It seems the Commission has again changed tack by asserting in the *Notice* that "It appears that the national TV ownership rule is not directly relevant, perhaps not relevant at all, to the goal of promoting viewpoint diversity [at the local level]"⁵⁵

The Commission buttresses this argument by contending that non-network owned affiliates play an important counter-balancing role to the national networks because they have the right not to air programming from the network with which they are affiliated. This would be a valid reason to consider allowing

⁵³ Notice, ¶128.

⁵⁴ *Fox Television*, 280 F. 3rd at 1033.

further consolidation without fear of harm to local diversity and competition if, in fact, affiliates were truly incentivized to make independent programming decisions. The economic realities of network TV affiliation, however, do not support this assumption. We believe the issue should be addressed in terms of relative power to influence viewpoints in the national TV market both nationally *and* locally.

8.2 Market Power in the National TV Market

We would tend to agree station ownership concentration in the hands of a few, presumably the “big four” national networks, may not serve the public interest and we further question the Commission’s competition assumptions regarding non-network owned affiliates. While stations seek to achieve a distinct local identity principally through the quality of its local news programming, and by targeting local audience groups with special programs and marketing events, the national and local TV markets are inextricably linked through the network-affiliate dynamic of national TV. The national TV networks, which include ABC, CBS, FOX, UPN, WB, Paxson, Univision and Telemundo, have dual spheres of influence by virtue of being *both national networks and local station groups*. As such, the networks have the ability to influence viewpoints in both the national and local markets. The networks have affiliates, owned by independent station groups in virtually every DMA in the country, as well as their own stations in various local markets. By contrast, the independent station groups, whose

⁵⁵ Notice, ¶ 135.

stations are generally affiliates of the national networks, are entirely local entities because their ownership interests only extend to the local markets in which their stations reside. Their affiliation with the national networks *locally* affords them no additional power to influence viewpoints nationally. In fact the influence on viewpoint diversity is entirely *unidirectional* from network to affiliate, whether network-owned or independently-owned.

8.3 Affiliates and Market Competition

The Commission has proposed that “independently-owned affiliates play a valuable counterbalancing role [to the national networks] because they have the right to decide whether or not to clear network programming, or to air instead programming from other sources that they believe better serves the needs and interests of the communities to which they are licensed. The Commission further argued that independent ownership of stations increases the diversity of programming by providing an outlet for non-network programming.”⁵⁶ There are several problems with this observation. Whether a station is affiliated with one of the four major networks (NBC, ABC, CBS or Fox) has a significant impact on the composition of the station's revenue, expenses and operations. While it is true that independently owned affiliates have the *right* not air network programming, it is not necessarily in their interest to do so because as profit maximizing entities, it is more revenue and cost efficient for them to run network programming. The major networks regularly provide first-run programming

during prime time viewing hours at little or no cost to the affiliate, in exchange for substantially all of the affiliate's ad inventory during that time slot. Additionally, network affiliated stations generally enjoy higher ratings and ad rates than non-network affiliated stations. To the extent that affiliates air non-network programming they must buy it in the market, but they also retain all the ad revenues from the programming that time slot. It is well known in the industry that net effect of running non-network programming is reduced profitability. Therefore, viewpoint diversity would also tend to be reduced. The only true counterbalancing force to network-owned stations and independently-owned affiliates would be stations which are neither owned by a national network, nor affiliated with a network. However, given the nature of broadcasting economics, most stations choose to affiliate. Because the national networks are in a unique position to exercise market power in both the national and local TV markets, it seems logical and likely that they will benefit disproportionately from further consolidation, thereby reducing viewpoint diversity.

8.4 The Current National Ownership Rule

The current national ownership rule, legislated by the 1996 Telecommunications Act, does not restrict the absolute number of stations a group may own across the country but rather limits its total reach to 35% of the national TV audience as measured by the respective local TV markets or DMAs.

⁵⁶ Notice, ¶ 128.

This method of limiting ownership indirectly caps the number of stations a group can own: the total audience reach of the top 13 DMAs equals about 35%, so if a group owned a station in each of these markets, then under the current rule it would be prohibited from acquiring more stations because it would be fully attributed. In reality, TV groups can and do exercise influence over national markets by means other than attribution limits. An example would include NBC's financial investment in Paxson Communications. In 1999, NBC invested \$415 million, which complies with the 33% debt and equity test and currently represents no actual equity ownership interest.⁵⁷ The investment also included a series of options and warrants, in addition to budgetary approval, which would allow NBC to take control of the company with its 69 stations and national network should media ownership rules be relaxed. Under the current rules NBC receives no additional attribution for its interest in Paxson despite its influence over the company's finances. Such relationships ought to be reviewed should the Commission relax the national ownership cap from a hard 35% to a soft 35-45% range.

⁵⁷ The convertible preferred shares will not represent an equity interest until such time as they

are converted to common shares.

APPENDIX A

2.0 THE RELEVANT MARKET: LOCAL CABLE TELEVISION ADVERTISING⁵⁸

Assessments of monopoly power, its maintenance and abuse depend on the delineation of the "relevant" market in which that power is measured. It should be noted at the outset that the definition of the market is less a matter of precision for its own sake than a preliminary step in evaluations of anti-competitive behavior. Thus a firm with a complete (100%) share of a market for a certain good may not have monopoly power if it were costless for a potential competitor to enter in the event the producer raised prices. This section identifies the relevant market as the market for *local cable television advertising* in the towns and municipalities of Eastern Massachusetts and Southern New Hampshire and demonstrates that AT&T Broadband holds monopoly power in this market, that is, it possesses the power to set prices above marginal costs⁵⁹ and exclude or limit competition

In delineating the relevant market, (i) goods that fulfill the same functions or uses, (ii) the area in which these are available and compete for shares of the market, (iii) the plausible entry into the market for the good by existing producers and (iv) the barriers to entry or costs of providing/duplicating the good or service must be considered. Specifically, the following must be taken into account:

- ◆ the availability of goods and services, within an area reasonably and practically accessible to consumers, that can constrain the behavior of the alleged monopolist by providing practical substitutes for consumers
- ◆ suppliers which though currently not supplying the good (in the geographic region) could supply it to consumers (in those regions that face a price increase) with relative ease in the wake of the monopolist's attempt to garner super-normal profits and the ability and
- ◆ barriers to entry, or the cost, including time and effort, to potential suppliers of the good to duplicate production facilities and provide the good to the area in the wake of a price increase.

2.1 THE PRODUCT MARKET: CABLE TELEVISION ADVERTISING AND PUTATIVE SUBSTITUTES

The question at hand is whether there is one market of advertising, comprising cable television, broadcast television, radio, newspapers, direct mail, magazines, infomercials, billboards and the Internet, or different advertising markets for the differing media, specifically for local cable television advertising.

⁵⁸ See www.fcc.gov/transaction/attcomcast.html

⁵⁹ Obviously, the power is not total and is constrained by the own-price elasticity of demand (or the decrease in the demand for a good given an increase in its price).

Complicating the matter is the fact that different media can be substitutes from some advertisers and not for others. To assess the issue, the peculiar uses of cable television is considered, firstly by examining the peculiarities of video advertising and then by examining the difference between local cable and local broadcast television advertising. This description of the peculiar functions/properties of local cable television advertising serves as a preliminary step for the delineation of both the product market and the geographic market. This preliminary step is necessary to assess the meaning of price differences and sensitivity to price changes. For an alleged monopolist the matter becomes whether differing prices can be charged to those for whom there is no effective substitute for the media. (See below, Non-Linear Pricing.) In the absence of price and earnings data on advertising sales (notably from AT&T), a quantitative test of cross-price elasticities of differing advertising media and cable television advertising was not conducted. Comparisons were made between the prices of television broadcast advertising and those of cable and between price changes in newspapers advertising rates and those quoted on AT&T rate cards. For other media, the findings of other scholarly studies on the separateness of markets, the particular uses of each media and their different reaches are offered as evidence of the assertion that cable television transmission of video advertising constitutes a distinct market.

2.1.1 CABLE TELEVISION ADVERTISING VS. NON-TELEVISED MEDIA

Television advertising is distinguished from other media such as radio, newspapers, billboards, magazines and direct mail firstly by its coverage. More than 99% of all American households have a color television.⁶⁰ (Television coverage is of course not equivalent to cable television coverage. See below) Television coverage is far greater than that of other media. One media comparison study conducted in 2000 cited by AT&T in its promotional material found that 93% of adults surveyed were reached by television, as compared to 76% who were reached by radio and 63% reached by newspapers.⁶¹ Individuals

⁶⁰ The Economist, *Pocket World in Figures, 2002*. (London: The Economist Newspaper Ltd., 2001) p. 225.

⁶¹ AT&T Broadband, *Newspaper Coverage Comparison: New Hampshire Area NHA*. ATTB 23427. Source: www.tvb.org/adcenter/comparisons/reaches_adults.html. Scarborough research found that auto buyers in the Springfield DMA (Designated Marketing Area) were 44% more likely to watch World premier movies on USA, TNT or Lifetime than read the Springfield Union News. ATTB 3968.

spend more time watching television than either listening to the radio or reading daily papers.⁶² These differences also appear to hold for cable television in those regions in which it is available. In the New Hampshire area AT&T found that newspapers in the region reached no more than 65% of all household as compared to 79% covered by cable television.⁶³ The differences in coverage rates of the varying media imply one limit to the substitutability of different advertising media. For consumers who do not listen to the radio and/or read newspaper or magazines, television advertising cannot be substituted by the former two media. Placing advertisements on radio, newspapers or magazines means forgoing substantial and growing shares of consumers. A mix of media is thus needed to reach the entire market, and thus, at significant margins, alternative media cannot substitute neatly for each other.⁶⁴

More importantly, consumers are far more likely to remember the information and brand of a good or service when presented in the form television advertisings with its combination of sound, visuals and motion than in when presented through other media.⁶⁵ Similarly, AT&T stresses that a majority (61%) of consumers themselves "would recommend to an advertiser to make them aware of a new product or service."⁶⁶ The effectiveness of television advertising for brand recognition also makes radio, newspaper and magazine advertising limited substitutes for television advertising.

⁶² "Media Usage: Annual Time Spent." Source: Veronis, Suhler. AT&T Media Services. ATTB 3948. Approximately 1580 hours were spent per person annually watching TV compared to 967 hours listening to the radio and 154 hours reading the newspaper. Furthermore, the general trend for television viewing has been increasing compared to declining newspaper circulation. Source: Editors and Publishers, Nielsen Media Research. ATTB 3949.

⁶³ This figure conservatively assumes that there is no overlap among the households reached by different newspapers. Overlap would lower the coverage rate. *Ibid.* ATTB 23433.

⁶⁴ Advertising experts and practitioners certainly view the matter in these lights. "There's no one media that does it all . . . [Y]ou need multiple forms of advertising to reach the market." Deposition of Nicholas DeAngelo, p. 27. To illustrate, the combined circulation of the 13 largest dailies in the Boston (Manchester) area (Globe, Herald, Worcester Telegram & Gazette, Quincy Patriot-Leger, Manchester Union Leader, Metrowest (Framingham) News, Lawrence Eagle-Tribune, Hyannis Cape Cod Times, Lowell Sun, Brockton Enterprise, The Salem Evening News, Gloucester Daily, and the Daily News of Newburyport) was 1.28 million in 2001. Sources: *Marketer's Guide to the Media, 2002*. p. 191, and *Essex County Newspapers, Advertising Rates 2001*. Even assuming no overlap, the coverage of these newspapers is 56.9% of the estimated households in the Boston (Manchester) area. Cable television in the region has a household penetration rate of 82%. And television has a penetration rate of 98.2% (national). Source: *Marketer's Guide to the Media*. Given differences in the scope of coverage, newspapers, e.g., cannot substitute for television in a substantial share of the market.

⁶⁵ See AT&T Promotional "The Cable Television Advertising Advantage." Exhibit 6, James Sullivan, CSK, 3/13/02/ (Full Cite Needed) for sources of research.

2.1.2 BROADCAST TELEVISION ADVERTISING AND CABLE TELEVISION ADVERTISING

The effectiveness of the sound and visuals in motion form of advertising on television do not distinguish cable from broadcast. Of all possible media substitutes for cable television advertising, broadcast media is the closest. Whether local cable television advertising can be delineated as the relevant market thus depends greatly on the differences between cable and broadcast television (and satellite). On average, cable television households, for obvious reasons, tend to have higher incomes than broadcast television. (For a service like Prime Communications which caters to automotive dealers, the fact that cable television households also purchase a larger share of automobiles than non-cable households provides a unique value to cable.⁶⁷)

Local cable television advertising is distinguished from other available forms of video transmission such as broadcast television and satellite video broadcast by two salient peculiarities: demographic targetability and geographic targetability. The various programs aimed at small demographic market niche's on cable television - programs which broadcast television is unlikely to run because the audiences would be too small at any given time, e.g., the Weather Channel - enables advertisers to target more well defined audience that better overlaps with the intended market. AT&T's own promotion materials stress cable's capacity to "zero in on people who tend to buy your products and services."⁶⁸

Geographic targeting is key in the creation of a cable television advertising market that is distinct from the broadcast television advertising market. Geographic targeting, more so than demographic targeting, is equivalent to purchases of small and divisible quantities in per 1000 viewer terms. This insertability of ad spots into local systems offers a divisibility to cable transmission, a desired property lacking in broadcast and satellite television. In the latter two, marketers are unable to purchase advertising just for an intended audience of, e.g., sports viewers in Lexington, Massachusetts, on broadcast television or satellite television without purchasing advertising for the entire broadcast range. That is, broadcast television advertising cannot divide the audience of any particular program beyond a point. Advertisers are thus forced to purchase shares of advertising that have of no (expected) value for them; it is in this sense

⁶⁶ Ibid.

⁶⁷ "Is Cable Able." *Marketing Insights*. ATTB 4052. Differences in automotive purchasing rates are significant. Cable households were 15% more likely to purchase a new automobile than the US average, whereas non-cable households were 16% less likely to do so.

that advertising expenditure is 'wasted' on broadcast television. For smaller companies such as local automotive dealers, video advertising for small regions is available only on cable. While the same regions can be accessed by advertising on broadcast television the cost of doing so is prohibitive as purchase of advertising to municipalities that advertisers do not seek to and cannot capture, and the associated costs of doing so, are unavoidable. Advertising in, e.g., Lexington on broadcast television is thus the same in price as advertising to the bulk of Eastern Massachusetts; for many small businesses, this lies beyond their budget. The demand for targeted advertising amounts to a demand for 'small' quantities, in viewer terms, of television advertising, a demand that can only be supplied by cable systems providers. Local cable television advertising is thus less 'wasted' than on advertising on broadcast, i.e., it can be inserted by locales and focused to the intended markets thus suffering from less spillover onto those outside of the market. While in a competitive market we can expect the different prices for 'smaller' units of advertising to simply reflect the differences in the effectiveness of advertising (and thus in the value to advertisers), differences in a monopolized market may not do so. (See below, Pricing and Distinct Prices.)

2.1.3 WHY OTHER MEDIA CANNOT OFFER THE SAME SERVICES

Cable television system operators are further do not face any challenge from the providers of putative substitutes in the provision of local cable television advertising. Suppliers of broadcast and satellite television cannot easily retool facilities to target video advertising to municipalities via cable. Transmission is confined to larger areas. Municipalities have subscriber bases that are considerably smaller than the size of broadcast audience. Suppliers of newspaper, radio and billboard advertising are even less able to provide locally targeted video advertising via cable and unable to offer video advertising. The cost of facilities to transmit video advertising, either in the form of broadcast television or satellite is considerable. And these cannot locally target.

The promise of locally targeted video advertising through other media has yet to delivery. Local exchange carriers have been slow in entering the market for multichannel video program delivery. And broadband Internets hope of delivering streaming video that is comparable to broadcast, satellite and cable television remains unfulfilled. The suppliers of cable television advertising are keenly aware of the fact

⁶⁸ AT&T Broadband promotion material. "The Cable Television Advertising Advantage." August 2000.

that the suppliers of advertising in other media, including television, cannot easily shift production offer targeted video advertising. This fact is not merely a position expressed in promotional literature to gains clients but is reflected in the differences in prices and pricing strategy. (See below.)

2.2 THE GEOGRAPHIC MARKET: LOCAL MUNICIPALITIES

In light of the above - specifically, in light of the local cable television advertising as distinguished by the local targetability of advertising in video form - it follows that the geographic market is bounded by the geography of local systems, specifically the municipal levels at which advertising is inserted. Certainly, systems outside cannot offer locally targeted video advertising to the households in a municipality. Nor can advertisers turn to supplier of cable networks outside the municipalities or levels at which advertising is inserted to transmit the video advertisement over cable to the target audience.

Here a note is needed. Cable television providers operate in two markets: the market that delivers video programming for subscribers of cable television and the market that delivers audiences to advertisers. The degree of competition in the second market depends on the level of concentration in the first. That is, if audiences do not have access to multiple cable providers, the cable system possesses a monopoly of the product sold in the advertising market. This monopoly is territorially bounded by the fact of the possession of cable lines to households. The second technical aspect that serves to delineate the geography markets also stems from the physical infrastructure of cable systems, namely, the capacity to insert advertising at local points. The 'geographic' aspect of the market thus stems from the ability of consumers to reasonably find nearby alternative sellers of the product in the wake of a price increase above competitive levels by any one seller.⁶⁹

Providers of cable services in nearby systems cannot deliver cable audiences in adjacent systems given the physical structure of cable lines, that is, they cannot insert advertising into those localities in which they do not possess systems. Given that consumers are unable to turn to nearby cable systems to deliver local cable advertising to audiences in a specific town and that cable providers in adjacent systems cannot 'transport' cable services to a different franchise, the relevant geographic market is clearly the municipalities where franchises are granted. It should be further noted that these facts further implies a

⁶⁹ Department of Justice, *Horizontal Mergers Guidelines*. Section 1.22

perfect correspondence between a total local monopoly in the market for cable television programming and the market for local cable television advertising to that municipality.

2.3 PRICES, PRICING AND PRICE SENSITIVITY

Distinct prices and, especially, the (in)sensitivity to (potential) price changes are taken to be the hallmark signs of whether two goods are substitutable and thus belong in the same market.⁷⁰ For the market in advertising, prices should ostensibly reflect the effectiveness of media and the return in the forms of sales revenue on advertising dollar spent. This would hold in so much as advertising is an input in the production of sales. The limitations of this theoretical logic of prices in the advertising market results from the fact that the effects of any one advertising medium are poorly observable and measurable. Advertising campaigns involve multiple media and any responding purchaser of the goods and services advertised may be responding less to ads on any single medium than the awareness generated by advertising on multiple media. This is less true in the relationship between cable and television since both deliver video advertising. Differences in per rating point price thus should be effectively similar, controlling for demographic factors such as differences in the disposable income of the audience. Relations between different goods are expressed in terms of sensitivities to price/quantity changes, usually measured in cross-price elasticities. Sensitivity to price changes can be manifest in the form of changes in the price and/or quantity of putative substitutes.

In assessing the distinctiveness of prices of local cable television advertising and local broadcast television advertising, the guideline rates on AT&T's 'rate cards' were used. Prices are negotiated on a case by case basis ideally reflecting the value of advertising to the consumer but practically reflecting the bargaining power of the partners. For a consumer in a competitive market, prices offered by different suppliers should equalize as each has an incentive to capture the consumer and will offer lower prices; in

perfect competition, prices will equalize to the marginal cost of provision. The guideline rates serve as a framework for negotiation. Discounts greater than 30% *of the published rates* require approval, giving the guideline rates a regulatory (of final prices) function. The published rates also serve as an anchor from which to begin negotiations over prices and thus a benchmark.

Changes in the guideline rates have taken place primarily in the event of the consolidation or segmentation of cable systems. Consolidations and segmentation alter the number of subscribers in the system; *ceteris paribus*, upward rate changes for the new system are needed to preserve the per 1000 subscriber/viewer price. Similarly, rates are lowered as in the case of the segmentation of the Newburyport cable system area from a larger system to reflect the smaller zone and smaller subscriber/viewer base.⁷¹ The one instance of a change in rates that did not concern an increase in the rates in the Worcester system, the only change in rates for the period from May 2001 to May 2002. Worcester rates were changed because of a persistent shortfall in supply/inventory at the prevailing price. AT&T's sales representatives sign contracts for advertising spots with clients. The size of the system and the dispersion of the sales force carry the potential for multiple contracts for the same advertising spot. It is clear from Liedtka's deposition that AT&T uses persistent shortages as the primary signal that guideline prices must be changed. A persistence of unfulfilled contracts serves as a signal of excess demand for the available spots at the prevailing rate and rates are changed to increase revenue.

It could be argued that the however imperfect the system it does respond to changes in price of advertising in other media. As prices of potential substitutes increase, consumers of advertising substitute cable television for, e.g., newspaper, radio and television broadcast advertising. Rising (falling) demand for cable television advertising resulting from a change in relative prices exhaust (increase) inventory and signal the need for a price change in response. Against this reading, three facts are of note. First, it is not the exhaustion of inventory and the rise of unfulfilled contract that signals a rise in prices of advertising in

⁷⁰ The price of one good may be responsive to that of another also if they are complements. Usually cross price elasticities are measured to determine whether goods are substitutes, complements or altogether unrelated. For two goods, when the change in the demand for one good is positive for a price increase in its putative substitute, the cross-price elasticity will be positive, *ceteris paribus*. They will be negative when the goods are complements, e.g., tape decks and audio tapes. And they will be effective zero when the two goods are unrelated. Cross-price elasticities were not calculated for lack of data on local cable television advertising spots sold by AT&T in the Western Massachusetts and Southern New Hampshire regions.

other media but a persistent exhaustion of inventory and chronic unfulfilled contracts. Nor does this system compensate for changes in the price of putative substitutes that do not exhaust inventory but, e.g., merely reduces excess inventory.⁷² Second, as illustrated below, the guideline rate card price per 1000 viewers of cable television advertising is significantly higher than the price per 1000 viewers of broadcast television advertising. Third, the guideline rate card prices of cable television advertising appear to be insensitive to changes in the price of advertising in other media. (See below.)

2.3.1 DISTINCT PRICES

In AT&T's description of the changes in rates and in the actual changes in rates cited by AT&T officers, no mention is made of changes in the prices of putative substitutes. First, prices of cable television advertising tend to be distinct from its closest substitute broadcast television advertising.⁷³ To illustrate, the Boston system of AT&T Broadband contains 149,352 subscribers.⁷⁴ Prime time advertising on Tier 1 channels costs \$75 per 30 second spot.⁷⁵ The cost of advertising in per 1000 subscriber terms is approximately \$0.502. This price however does not permit any meaningful comparison with television broadcasting which is priced according to (expected) ratings points. Ratings points for cable vary show by show as in broadcast. Despite the rising share of the audience for cable in the aggregate, the average ratings per show are in fact very small, as they are averaged out over an increasing number of cable channels. That is, the issue at hand is calculating the price of a 30 second video advertising spot per ratings point (or for the actual and not potential audience).

Conservative assumptions can illustrate that cable television advertising prices tend to be distinct, higher than television by varying degrees. Channel 5 in the Boston area charges \$1,000 per spot for the 4

⁷¹ Deposition of James Liedtka, p. 63.

⁷² Data on ad spots sold were not made available for a full evaluation of cross price elasticities of demand.

⁷³ Cable television claims of a rising share of the audience must be offset against the growth in the number of cable channels available. Advertisers do not purchase advertising on cable *qua* all channels not available through broadcast. Rather they purchase advertising on one of many cable channels, which share this audience.

⁷⁴ Department of Telecommunications and Energy, Commonwealth of Massachusetts, *Operator System List*. July 10, 2002. p. 5.

p.m. to 8 p.m. time slot.⁷⁶ The coverage are of the broadcast channel is claimed to be 1,597,830 households. In 2000/2001, the primetime household ratings of ad supported cable was 26.0, as compared to 27.6 for the 4 largest broadcast networks (ABC, CBS, NBC and Fox).⁷⁷ Ad supported cable, however, comprises more than 30 different channels; AT&T notes 33 in its 3 tiers.⁷⁸ Here we assume that the proportions that hold for primetime also hold for the 4 p.m. to 8 p.m. slot, i.e., cable's rating as only slightly smaller than that for the 4 major networks. Cable's share may be greater during this period but, for the purposes here, we can compensate by allocating cable's rating ratings among simply the 11 tier 1 channels, thereby by distorting the relative size of their audience vis-a-vis broadcast television by a factor of 3.⁷⁹ The multiple (2.919) amounts to roughly the number of ads on cable seen by the same share of television viewers as one ad on broadcast. Furthermore, we weight the rate by the ratio of Channel 5's broadcast household coverage to the number of subscribers in a system.⁸⁰ E.g., the broadcast range of channel 5 comprises approximately 9.22 times as many households as the Boston cable system with its 173,259. The 4 p.m. to 8 p.m. rate (\$57) is then multiplied by the ratings multiple and the broadcast household/cable subscriber ratio to generate comparable measures.⁸¹ The following table illustrates the differences.

⁷⁵ NSA Rate Card. Exhibit 29, Deposition of James Liedtka. Information on electronically stored rates in AT&T's AdBlock system were not made available at the time of this report. Tier 1 comprises A&E, CNN, Discovery, ESPN, HGTV, Lifetime, Nick at Nite, Nickelodeon, TBS, TNT and USA networks.

⁷⁶ Affidavit of Donna Reid, para. 8.

⁷⁷ Mitch Tebo, ed., *Marketer's Guide to the Media: 2002*. p. 51.

⁷⁸ The programs in which AT&T can insert cable television advertising do not command the same audience shares as programs on broadcast television advertising. While cable's share of viewers has been growing, (i) much of it is captured by non-ad supported channels such as HBO and (ii) is shared among a growing number of channels.

⁷⁹ Using 33 instead of 11 channels generates a much larger multiple and thus higher prices.

⁸⁰ Subscribers as listed by Department of Telecommunications and Energy, Commonwealth of Massachusetts, *Operator System List*. July 10, 2002.

⁸¹ NSA Rate Card. Exhibit 29, Deposition of James Liedtka. Information on electronically stored rates in AT&T's AdBlock system were not made available at the time of this report. Tier 1 comprises A&E, CNN, Discovery, ESPN, HGTV, Lifetime, Nick at Nite, Nickelodeon, TBS, TNT and USA networks.

SYSTEM	4P.M. TO 8P.M. RATE WEIGHTED BY RATINGS MULTIPLES AND BROADCAST RANGE/ SUBSCRIBER RATIO (\$) ⁸²	AVERAGE WAGE, 2000 (\$) ⁸³
Boston	2,839.00	57,749
Braintree	4,348.68	37,909
Brockton	3,689.07	33,425
Cambridge	3,068.46	58,781
Lexington	1,621.05	68,192
Malden	2,720.14	33,279
Quincy	2,797.59	43,487
Scituate	3,607.68	28,038
Woburn	1,534.42	46,225

The figures in the second column are imprecise, but the relevant matter is the direction in which they err. They tend to greatly distort the price of cable advertising per viewers downward towards the price of broadcast television advertising. The fact that the channels on tier 1 of AT&T's rate cards do not capture the entire cable viewing audience means that the ratings multiple to equalize cable television with broadcast in terms of viewing share is much higher and thus the true cost is in fact higher. The cable television advertising range of 1.53 to 4.35 times the cost of broadcast television for the cases listed above may be exceedingly conservative. "On a cost per thousand basis, based on actual viewership, cable advertising can be much more expensive than broadcast." But as Donna Reid went on to note, "However, the ability to run ads that are specifically targeted (in terms of geographic area, channel, program audience, purchasing preferences, etc.) with greater frequency than would be possible for the same advertising dollars on broadcast television enables cable providers to set prices without regard to the prices charged by broadcast television."⁸⁴ The least expensive of these systems, the Boston zone, remains on estimate per viewer terms 53% more expensive than Channel 5. That is, to the extent that they can be made comparable (in cost per

⁸² Rates and subscriber base as quoted in Exhibit 29, Deposition of James Liedtka. Estimates using the number of subscribers cited in Department of Telecommunications and Energy, Commonwealth of Massachusetts, *Operator System List* yields higher prices. For the zones noted in the AT&T Media Services rate card, the per ratings point adjusted price is less than \$1000 for only the Springfield system (\$844). The next least expensive system is Boston.

⁸³ Source: www.state.ma.us/cc

⁸⁴ Affidavit of Donna Reid, para. 14.

ratings point terms) local cable television advertising remains significantly more expensive than broadcast television delivery of video advertising.

It could also be argued that the different rates and the overall higher per rating point difference in rates vis-a-vis broadcast television reflect the effectiveness of targeting.⁸⁵ That is, to the extent that advertising on broadcast television is wasted, its per ratings point price falls relative to cable per ratings point price. There is no precise data on the effectiveness of advertising on differing types of media, and to the extent that most advertising campaigns use different media, measurement by both observers and purchasers of advertising is very imperfect, especially give that advertising campaigns generally involve a mix of media.

The objection that prices differ between broadcast and television because of differences in effectiveness (reach to a responsive audience) and offer this difference as an explanation for advertising prices in the two media cannot account for differences in price between cable systems. One rejoinder may be that the different rates reflect differences in purchasing power and thus in potential revenue to be gain. Against this objection is the surprising fact that there appears to be no positive correlation between the average income of the municipality and cable television advertising rates for the towns above. (The correlation in fact seems to be negative; the higher average income towns seem to enjoy lower local cable television advertising rates.)

As argued above, the divisibility (of viewers) in the cable advertising slots as described above creates a separate market for 'smaller' units of advertising, a market monopolized by AT&T Media Services. For many local advertisers, broadcast television advertising is effectively beyond their budget, especially to the extent that frequency is key in advertising, and this does not enter into calculations of substitution. There is no clear reason why per viewer cable costs would be so much greater if the markets were indeed competitive and if the goods were substitutable. Rather the higher prices, which persist for non-negligible periods of time, reflect AT&T's monopoly power in the market.

⁸⁵ See Peter Danaher and Roland Trust, "Determining the Optimal Level of Media Spending." *Journal of Advertising Research*. 1994, pp. 28-34. They offer a theoretical framework for assessing the optimal allocation of the advertising budget. Notable in their article is the vagueness of the measure of effectiveness, especially as advertising may have more than one objective, e.g., awareness of temporary promotion, or general brand awareness.

2.3.2 SENSITIVITY TO PRICE CHANGES IN PUTATIVE NEWSPAPERS

Comparison of the prices of cable television advertising rates over time with those of its putative substitutes reveals the former to be insensitive to even significant and lasting changes in one putative substitute, newspapers. The advertising rates of some local newspapers for the period 2000-2002 serves as a case in point.⁸⁶ As the following table shows, between 2000 and 2002, price for advertising in the *Boston Globe* and the *Boston Herald* increase by more the 4%, whereas cable television advertising fixed rates (as well for all other times) remained unchanged. Advertising rates for Essex county papers increase by more than 9 percent, while rates for cable television advertising in surrounding systems again remained unchanged. Similarly, classified advertising rates for *The Sun* (Lowell) changed by nearly 6% as cable advertising rates in Lowell remained flat.

⁸⁶ Given the effective absence of changes in the rate card (guideline) price for cable television spots save for a small handful of systems and the increase in the prices of advertising in newspapers and in television, the cross price elasticity can be said to be 0 since δp (the change in the price of cable) = 0. This reading of course should be resisted as actual average prices for advertising spots on cable are unknown as are quantities sold.

Year	LOCAL NEWSPAPERS					AT&T CABLE SYSTEM ⁸⁷				
	<i>Boston Globe (Tier 1 ROP)</i>	<i>Boston Herald Retail Rates (1/4 page, 2 day program)</i>	<i>Essex County Papers, Classified Ad Display Rates</i>	<i>Essex County Papers, Retail Rates⁸⁸</i>	<i>The Sun (Lowell) Classified Ad Display Rates⁸⁹</i>	<i>Beverly</i>	<i>Boston</i>	<i>Haverhill</i>	<i>Newburypo rt</i>	<i>Lowell</i>
	\$341.53	n/a	\$27.60	\$35.50	\$21.75	\$26.00	n/a	\$36.00	\$22.00	\$42.00
	\$365.03	\$1480	\$29.05	\$37.30	\$23.00	n/a	\$90.00	n/a	n/a	\$42.00
	\$380.00	\$1552	\$30.25	\$38.85	\$23.00	\$26.00	\$90.00	\$36.00	\$22.00	\$42.00

⁸⁷ Fixed Rates. Source: AT&T rate cards, Exhibits 26, 28, 29. Liedtka furthermore did state that to his knowledge guideline rates had been changed only in Worcester and in instance of the mergers and segmentations of cable systems. These 5 systems have been noted as separate and have continuously existed as a cable system of AT&T Broadband since 2000.

⁸⁸ Open Rate, cost per column inch. Source: Essex County Newspapers, *Advertising Rates, 2000, 2001, 2002*.

⁸⁹ Source: The Sun (Lowell), Classified Advertising Rate Card, #66-67, 2002 figures obtained at http://63.147.65.14/lowellsun/advertising_ad_online/print_rates.html

% Change 2000-02 ⁹⁰ (2001-02)	11.2% (4.1%)	(4.9%)	9.6% (4.3%)	9.4% (4.2%)	5.7% (0.0%)	0.0%	(0.0%)	0.0%	0.0% (0.0%)
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⁹⁰ Data on the quantity of advertising spots available was not available from AT&T. Thus there is no information on whether increased demand for cable television resulted from a rise in newspaper ad rates. It should be noted that the quantity of spots available to AT&T is determined by the number of channels offered and the number of local spots offered ad supported cable television networks. The supply of local ad spots is thus not determined by the cable provider but rather by the network and there is no reason to believe that national ad supported cable networks are sensitive to changes in the rates of local advertising media. I we assume that the supply of local cable television ad spots is fixed, then the issue becomes why AT&T didn't raise prices, a la a good monopolist. One possible answer is that its markup is already near local cable televisions advertising's own price elasticity. (But see below.)

AT&T will claim that the prices quoted on rate cards are only rough guidelines. They serve as benchmarks and prices may be discounted as much as by 30%. To the extent that the rate cards are unchanged, the real price of these and thus of discounted prices *fall* since they are not adjusted to compensate for inflation. Yet, the only actual system of prices available seem insensitive to prices and price changes in putative substitutes, even in those ostensibly watched by AT&T Media Services on any regular basis, broadcast television and newspapers.

It should be noted that studies have found distinct advertising markets for local radio advertising (using the technique described in note 40)⁹¹ and for national newspaper advertising.⁹² Ekelund and his colleagues did find evidence that local broadcast television advertising is *not* a separate market and substantial substitutes for broadcast television advertising exist locally.⁹³

While one substitute for broadcast television advertising is cable television, the reverse relationship does not necessarily hold for many buyers. Advertisers who wish to broadcast on a wider range can equivalently broadcast on all the local systems in the broadcast range. Advertisers who wish to transmit video advertising to only a small part of the broadcast television range and find the price of broadcast television advertising prohibitive and/or beyond their budget constraint have no alternative to cable television. To return to the example used above, an advertiser who wishes to reach only the 38,000 subscribers⁹⁴ in Cambridge Massachusetts during the 4p.m. to 8p.m. time period has the option of either spending approximately \$1000 on channel or \$35 on a tier 1 channel on AT&T system. Broadcast does not serve as a practical and for some feasible substitute to cable television advertising given its (geographic) indivisibility.

2.3.3 THE MARKET AS DELINEATED BY CONCERN ABOUT THE POTENTIAL PRICING DECISIONS OF COMPETITORS

An alternative definition of the market adds to the dynamic of prices all considerations, including the potential decisions of other suppliers, that enter into the quantity and pricing decision made all suppliers of the good and putative substitutes. This attentiveness by producers of the good to the reaction of the supplier of (competing)

⁹¹ R.B. Ekelund, et al., "Is Radio Advertising a Distinct Local Market? An Empirical Study." *Review of Industrial Organization*, 14: 239-256, 1999.

⁹² Busterna found that the market for national newspaper advertising to be distinct market using cross price elasticities. J.B. Busterna, "The Cross-Elasticity of Demand for National Newspaper Advertising." *Journalism Quarterly*. Summer/Autumn 1987. pp. 346-51.

⁹³ Robert Ekelund, et al., "Are Local TV Markets Separate Markets?" *International Journal of the Economics of Business*. 7: 79-97. 2000.

⁹⁴ By AT&T Media Services account, Rate Card, Deposition of James Liedtka, Exhibit 29. The "Operator System List." Department of Telecommunications and Energy, Commonwealth of Massachusetts, Office of Consumer Affairs and Business Regulation. (July 10, 2002) places the figure at 27,418. The differences do not change the argument.

goods to changes in the price or output of their own product is a corollary of sensitivity to price changes as substitutes shape behavior of the firms pricing.⁹⁵ For example, prices may be stable because a firm that holds 100% market share of good is dissuaded from raising prices because it is aware that to do would lead to an exit of consumers to a substitute good. Crucially, it would look to the production and pricing of the substitute to inform its own production and pricing decisions. Differences in prices and an insensitivity to price changes in putative substitutes are thereby evidence of a separate market for a good.

AT&T's pricing system ostensibly pays attention to the pricing decisions made in other media. In his deposition James Sullivan suggests that AT&T is sensitive to the share of the advertising budgets of Prime's clients allocated towards other media and that AT&T sought to provide incentives for Prime to reallocate shares towards cable television advertising:

Sullivan: We talked [with Prime] about further incentives and discounts to make sure that we would be competitive with newspaper, radio, Yellow Pages, direct mail, telemarketing, all forms of advertising. We wanted to give Prime, you know, every opportunity to make the best possible case for cable as a competitive media with the rest of the media in the marketplace.⁹⁶

The deposition further reveals that AT&T monitors through the advertising agencies that it sells to on behalf of advertisers the share of a client's advertising budgets to newspapers and broadcast television.

Q: Does AT&T keep any written record of how the different agencies will allocate the advertisers' dollars?
Sullivan: The only record, the written record, that I am really aware of is the CMR reports [that show advertising dollars allocated to] . . . broadcast television and newspaper.⁹⁷

Note that this monitoring of the allocation of the advertising budget of prospective clients should not be confused with strictly or primarily with a concern for the production (changes in ad spots) and pricing decisions of potentially competing media. To the extent that advertisers and ad agencies believe that different media offer peculiar characteristics and to the extent that advertising campaigns believe one mix to be more effective than another, changes in the allocation of advertising budgets may have little to do with shifts in price or supply. For example, a firm may decide that an unexploited customer base exists among those who demand one-to-one marketing and consequently reallocate its advertising budget towards event-marketing. The reallocation would not be a reflection of changes in the price or supply of putative substitutes to cable television advertising but rather a demand for the peculiar traits of event-marketing.

⁹⁵ This classic conception can be traced at as far back as Edward S. Mason, "Price and Production Policies of Large-Scale Enterprises." *American Economic Review* Vol. 29, (1939).

⁹⁶ Deposition of James Sullivan, pp. 120-121.

⁹⁷ Deposition of James Sullivan, pp. 16-17.

There is evidence that AT&T was aware of rates charged in television, newspapers, radio and direct mail during the April 2000 period. The internal reference document *Advertising Rates: New England Area* complied rates in different media for the purpose of "provid[ing] the sales force with current information as background in a presentation with a client or prospect."⁹⁸ But there is no evidence that it monitors rates on a regular basis.

The standing of these facts for the delineation of the relevant market is however unclear. The description of AT&T's system of pricing as described in the depositions of James Sullivan and James Liedtka suggest that this awareness plays no role in pricing decisions. Yet, as the analysis above suggests to actual pricing decisions of broadcast television suppliers and newspapers do not seem to impact on AT&T price guides.

2.3.4 MONOPOLY AND NON-LINEAR PRICING

Theoretically, a monopolist can present a discriminatory price schedule to different types of buyers, notably according to their budget constraint.⁹⁹ Monopolies must set linear prices, or the same per unit amount, unless they have knowledge about a consumer's utility function (or value of the good to a particular consumer) and the ability to control resale. Non-linear prices, such as bulk discounts, open up the possibility of buying large amounts and reselling the smaller units for higher per unit prices and pocketing the difference.

Providers of cable television advertising are able to distinguish consumers according to the demand for cable television advertising. First, research, monitoring of past behavior and the absence of anonymity enables AT&T to tailor prices to each buyer. Prices are in fact negotiated on a case by case basis with the rate cards serving as guidelines. The budget constraint of a buyer can serve as signal of the extent to which he or she treats cable television as a substitute. (Note that AT&T does monitor the advertising budgets of its consumers through ad agencies.) Utility functions and budget constraints can furthermore be elicited from sellers, as has been shown through the use of game theory among other methods.¹⁰⁰ Specific quantity price bundles (such as high volume discounts) will lead to self selection. For auto dealers, it is not unreasonable to assume that larger advertising

⁹⁸ *Advertising Rates: New England Area*. Exhibit 94 JB, PAB 6/4/02. p. ATTB 4611.

⁹⁹ The literature on non-linear pricing is well developed. See, e.g., Jean Tirole, *The Theory of Industrial Organization*. (Cambridge, MA: MIT Press, 1988). Of interest to *Prime Communication v. AT&T Corp* is Yeon-Koo Che and Ian Gale, "The Optimal Mechanism for Selling to a Budget Constrained Buyer." *Journal of Economic Theory*, 92: 198-222 (2000) given that Prime's clients heavily comprise small and medium sized auto dealers with small advertising budgets.

¹⁰⁰ See Joseph E. Stiglitz, "Monopoly, non-linear pricing and imperfect information: The Insurance market." *Review of Economic Studies*. Vol. 44, pp. 407-430. The argument is also literally textbook. See David Kreps, *A Course in Microeconomic Theory*. (Princeton, NJ: Princeton University Press, 1990) pp. 306-314. For a game-theoretic discussion of non-linear pricing when demand schedules of particular consumers are unknown see Drew Fudenberg and Jean Tirole, *Game Theory*. (Cambridge, MA: MIT Press, 1992) pp. 246-250.

budgets imply larger sales and revenue, which in turn stems from serving (possessing) a larger market. A larger market in this instance can be taken to be a sign of greater geographic reach; to the extent that this is the case, broadcast and cable are more substitutable. The same is not true for those with smaller budgets. Smaller budgets serve as a signal for the absence of substitutes. AT&T can thus extract rents through higher per ratings point price for those with smaller advertising budgets by offering a price quantity bundle which there is no option to cable for locally targeted transmission of video advertising.

Second, the monopolist, is able to control resale. Bulk discounts are offered to advertising agencies which must be recognized as such, e.g., a past history and a reputation of selling advertising services to various marketers. Failure to comply with AT&T's terms can result, as in the case of Prime Communications, with a refusal to deal, threatening the advertising agency with the ability to serve as a full-service advertising consultant and manager as thereby threaten its reputation. In *Prime Communications v. AT&T Broadband*, a bulk discount of 30% was offered to Prime in exchange for its assistance in encouraging marketers to redirect their advertising budgets more towards cable television. Having decided that Prime Communications do not adequately redirect advertising budgets towards cable, AT&T suspended sales of cable television advertising to Prime Communications.

2.3.5 CONCLUSIONS ABOUT PRICING

Above it was suggested that AT&T's failure to markup prices in the wake of prices increases in putative substitutes and in light its very limited ability to increase the supply of local advertising spots suggests that it has marked up prices optimally for a monopolist. Against this is the fact that prices do not appear to have changed in many of AT&T's component systems suggests that pricing is rather idiosyncratic given that in real terms prices fall, even as the prices of putative substitutes rise. The evidence cited above from the deposition of James Liedtka suggests that AT&T looks to nothing save its inventories to determine pricing guideline. That is, it does not even take into consideration inflation; between 2000 and 2002, the CPI increased 4.34%.¹⁰¹ The comfort of ignoring inflation may be a testament to monopoly power in so much as supernormal profits are garnered and no competitive pressures exist for it to take into consideration prices in any ostensible competition for advertising dollars. It further suggests that AT&T expects a steady revenue stream from local advertisers regardless of the pricing decision of those who offer advertising in other media.

2.4 DO CONSUMERS AND PROVIDERS OF CABLE TELEVISION TREAT IT AS A SEPARATE ECONOMIC ENTITY/MARKET

¹⁰¹ Source: www.bls.gov/newsrelease/cpi.nr0.htm

The distinctiveness of cable television advertising is clear not merely in the pricing decision of AT&T but also in the fact that suppliers, buyers, advertising associations and experts in the advertising industry often treat local cable television advertising as a separate market. The advertising industry recognizes a separate market for cable television advertising and for local television advertising. Cable television advertisers themselves are organized in a distinct industry association, the Cable Television Advertising Bureau.¹⁰² References to cable television advertising (both national and local) as a separate product grouping are found in industry publications. And the wider advertising industry recognizes local cable ad spots as distinct from network cable and regional cable spots in advertising and promotional material¹⁰³, in industry self-descriptions for association members¹⁰⁴ and industry reference material.¹⁰⁵ These facts reinforce the observations above, namely, that there are distinct uses and distinct prices for local cable television advertising.

2.5 MARKET POWER

Once a relevant market is identified, assessments of market power, that is the ability to charge prices above competitive levels for a non-negligible period time and exclude potential competitors, depend on (i) the market share of the alleged monopolist and (ii) the barriers to entry. The former assess the degree of concentration in the market, or whether monopoly shares obtain for a firm. The latter by contrast measures whether these shares can be translated into supernormal profits, that is, whether competitors can easily enter in the wake of an increase in prices above the competitive rate. It also thereby measures whether a monopolist can supply below socially efficient levels (necessary to garner supernormal profits) without new entrants capturing unmet demand at prices that remain above marginal costs. That is, in light of barriers to entry, market share and the degree of concentration serves as a proxy for market power.

2.5.1 BARRIERS TO ENTRY

The barriers to entry in the market for cable transmission of video advertising are considerable. Two are of note in this instance: (i) the physical cost of building the network and gaining access to the households that are

¹⁰² www.cabletvadbureau.org

¹⁰³ AT&T own promotional literature clearly refers to local cable television advertising ('insertable cable' advertising) as a unique product. See Ex 90, JB, PAB 6-4-02. ATTB 3174.

¹⁰⁴ See www.cabletvadbureau.com for discussions of local cable television advertising.

¹⁰⁵ See for example *Marketer's Guide to the Media, 2002*. Vol. 25. (New York: VNU Business Publications USA, 2002).

consumers of cable services and (ii) the exclusive licenses between programmers and incumbent cable providers such as AT&T.

The physical costs of a network are extensive. These vary according to population density; the costs of laying coaxial cable increase as the distance between households increases. RCN has pursued a strategy of targeting urban centers in which to overbuild and thereby offer a household an alternative to the incumbent cable provider. RCN, the principal overbuilder in Massachusetts, estimates costs of the physical network of laying coaxial cable to be \$900 per homes passed.¹⁰⁶ The cost of providing households in Eastern Massachusetts served by AT&T is considerable. If we assume that all cable households in the 12 municipalities in which a competitors to AT&T have been granted an overbuild license and have laid cable are served by more than one cable systems operators, the cost of providing an alternative to AT&T in the Eastern Massachusetts would be in excess of \$1.13 billion.¹⁰⁷ Of course, RCN does not expect to capture the entire existing share of cable television customers in the overbuild regions. Assuming that expects to garner the 30% penetration it has set as a goal, the cost per customer is \$3,000 dollars. The cost would most likely be higher as the cost per house passed would increase outside of urban centers.

RCN has also cited the tactics of incumbents as a barrier to entry. Specifically, notes delays in gaining access to local rights-of-way, delays in pole attachment and the charging of excessive rates. It has also complained of the inability to acquire access to the inside wiring of MDU (multiple dwelling units).¹⁰⁸ The three classes of obstacles have made the duplication of facilities difficult for large telecommunications companies with substantial assets. It is impossible for a small advertising firm to do so.

Large, incumbent MSO's also often have exclusive agreements with programming networks. As a result new entrants are not able to offer the same services. Some multichannel video programming distributors have argued that the clustering of cable systems affords incumbent cable MSOs with bargaining power vis-à-vis cable programming networks which renders the latter less willing to sell programming to competitors.¹⁰⁹ They argue that the significant bargaining power of large MSOs in obtaining programming presents a barrier to entry.¹¹⁰ One consequence of both these agreements and this distribution of bargaining power is to make the services offered by

¹⁰⁶ See John Higgins, "RCN's high-wire act." *Broadcasting and Cable*. May 8, 2000. p. 23.

¹⁰⁷ Household figures based on Department of Telecommunications and Energy, Commonwealth of Massachusetts, *Operator System List*. July 10, 2002.

¹⁰⁸ FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Seventh Annual Report." §130. www.fcc.gov.

¹⁰⁹ FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Seventh Annual Report." §90. www.fcc.gov.

¹¹⁰ FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Seventh Annual Report." §163. www.fcc.gov.

competitors less attractive with no means for competitors to reasonably acquire programming and thereby disadvantaging them in the market.

These barriers make it difficult for even those with considerable capital such as RCN to enter the market to do so. And despite new entrants into the market for multichannel video programming distribution, incumbent MSO's remain in command of large shares of the market.¹¹¹ More importantly, many of the entrants, including RCN, do not currently possess the capacity to locally insert video advertising into their cable systems and thus target audiences in smaller locales. What these barriers identify is the durability of a monopolist's market position and thus an ability to garner supernormal profits for a non-negligible period of time.

2.5.2 MARKET SHARE AND CONCENTRATION

The market for cable television transmission of video advertising is restricted to geographical scope of the cable system(s) available to a household. Consumers are restricted to those systems that serve their residence. For the vast majority of consumers, this service is monopolized by a single cable provider in Eastern Massachusetts¹¹² and Southern New Hampshire.¹¹³ Recall that the consumers in one market serviced by a cable provider, the television viewing audience, are the final products delivered in another market, cable television advertising. In a market for local cable television advertising, a 100% share of households subscribing to cable television necessarily implies a 100% share of the market for local cable advertising. In conjunction with the aforementioned analysis of barriers to entry, this market share translates into market power in all those municipalities in which cable subscribers do not have access to an alternate cable provider. (Note, this is not to say that cable subscribers are charged rates above competitive levels. This market is regulated in all but a handful of municipalities. But in a competitive market cable systems can offer lower and lower prices to consumers to develop an audience for advertising. This possibility serves to not only make prices for cable subscriptions competitive but also those for cable television advertising.)

AT&T Broadband possesses 100% of all cable subscribers in 162 municipalities in Eastern and Central Massachusetts¹¹⁴ and 100% of 61 municipalities in the Southern New Hampshire region. 19 shires in Massachusetts

¹¹¹ FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Seventh Annual Report." www.fcc.gov.

¹¹² Defined here as Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk and Worcester Counties. These counties comprise 249 shires; AT&T is the sole provider in 190. In 12 others, there has been some overbuild. See below.

¹¹³ The New Hampshire Area comprises the regions around Concord, Manchester, Salem, Naaashua and Seacost. See AT&T Media Services "Market Coverage for the New Hampshire Area."

¹¹⁴ As of July 2002, AT&T Broadband services approximately 78% of all cable subscribers in Massachusetts. The remainder of the market is shared by 9 other multichannel system operators. Only 3 operators, in addition to AT&T, had market shares in excess of 2%: Adelphia Cable (7.12%), Charter

have been granted over build licenses - Arlington (81%), Boston (91.2%), Braintree (65.7%), Brookline (85.9%), Burlington (74.5%), Dedham (71.7%), Framingham (66.6%), Lexington (62.3%), Marlborough, Milton, Natick (87%), Needham (82.8%), Quincy, Randolph, Saugus, Somerville (68%), Stoneham, Wakefield (70.6%) and Weymouth. As of July 2002, subscribers had yet to be acquired in 7 of these shires.¹¹⁵ (All except Braintree are serviced by RCN; Braintree is serviced by Braintree Electric Light Department.) Its share of cable television households in Southern New Hampshire is total. Furthermore, a turnkey agreement with Charter Communications has made AT&T Media Services the exclusive dealer of local cable television advertising on the Worcester, Chicopee and Pepperell systems owned by Charter.¹¹⁶

Consumers of cable television transmission of video advertising do not have alternate suppliers for the service. The cost of overbuilding is considerable. (See above, Barriers to Entry.) In practical terms this means that the market for local cable television advertising is monopolized by AT&T as there is no other cable system to target a video commercial to a local audience. Very few households in Massachusetts (approximately 50,580 or 2% of all cable households) that current subscribe to cable services have access to more than one MSO. While overbuild continues, it is unlikely that AT&T's dominance (local total monopoly) will be challenged soon.

2.5.3 DOES AT&T POSSESS MARKET POWER?

Three facts should be considered in assessing whether AT&T possesses market power in the market for local cable television advertising. First, it is able to charge, on per ratings point terms, prices for video advertising that are considerably higher than those charged by television broadcasters, prices which are not explained by higher purchasing powers of the differing audiences. Second, there are considerable barriers to entry in the market for cable television services. Third, the market is highly concentrated at the municipal level. (It is also very concentrated in the regional and the state level.)

Communications (11%) and RCN (2.88%). (The HHI score for the state is 6217.) In Eastern Massachusetts, the area serviced by Prime Communications, the concentration of the provision of cable television is higher (HHI = 6432) with AT&T Broadband accounting for 79.5% of the market.¹¹⁴ Markets for cable television services, in sum, are highly concentrated in the state and, crucially, in its eastern region and dominated by AT&T.

With respect to the offer and sale of cable television of advertising, a 'turnkey' agreement between Charter Communications and AT&T Media Services has made the latter the exclusive seller of cable television advertising spots on the system of the former. (Combined, AT&T's share of the Massachusetts market grows to 88.7% (HHI=7928).)

¹¹⁵ Source: Department of Telecommunications and Energy, Commonwealth of Massachusetts, *Operator System List*. July 10, 2002; www.state.ma.us/dpu/catv/2ndlicnse.htm. Newton, Medford, Watertown and Woburn are also served by another cable provider, but it is not overbuild.

¹¹⁶ Deposition of James Liedtka, p. 91.

The second and third facts imply that AT&T possesses monopoly power in the market for local cable television advertising. The first suggests that AT&T does in fact exercise it. To elaborate this point, the question that the higher per ratings point price raises of local cable advertising raises is how these prices can be maintain for the lengthy time they have persisted? The fact that broadcast television cannot be divided prices it out of the budgets of advertisers seeking to target small localities. The absence of any other provider of small and 'divisible' video advertising markets gives AT&T monopoly power in this market.

This document is a record of evolving ideas, and is not intended as a final product. It is to be protected by work product privilege. The Information Policy Institute 2002.
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APPENDIX B

Selected Local Concentration Analyses for Radio – all data sourced from Duncan’s American Radio – Duncan’s Radio Market Guide: Supplement

New York		2001	
Radio Group	Revenue in Millions		Share
Infinity	\$ 240.6		34%
Clear Channel	181.5		26%
Emmis	86.6		12%
ABC	52.0		7%
Spanish Broadcasting System	52.0		7%
All Others	87.3		12%
Total Market Revenue	\$ 700.0		100%
HHI			2,117
C2			60%
C4			80%

Los Angeles		2001	
Radio Group	Revenue in Millions		Share
Clear Channel	\$ 268.7		32%
Infinity	250.4		30%
Hispanic Broadcasting	73.7		9%
Emmis	61.3		7%
ABC	41.7		5%
All Others	142.3		17%
Total Market Revenue	\$ 838.1		100%
HHI			2,076
C2			62%
C4			78%

Chicago		2001	
Radio Group	Revenue in Millions		Share
Infinity	\$ 181.5		34%
Clear Channel	113.7		22%
Bonneville	68.3		13%
Tribune	42.0		8%
ABC	28.5		5%
All Others	92.5		18%
Total Market Revenue	\$ 526.5		100%
HHI			1,916
C2			56%
C4			77%

Selected Local Concentration Analyses for Radio – all data sourced from Duncan’s American Radio – Duncan’s Radio Market Guide: Supplement

San Francisco		
2001		
Radio Group	Revenue in Millions	Share
Clear Channel	\$ 107.0	29%
Infinity	84.8	23%
Susquehanna	64.9	17%
ABC	46.6	12%
Bonneville	46.6	12%
All Others	25.1	7%
Total Market Revenue	\$ 375.0	100%
HHI		1,934
C2		51%
C4		81%

Dallas-Fort Worth		
2001		
Radio Group	Revenue in Millions	Share
Infinity	\$ 95.2	26%
Clear Channel	89.8	25%
ABC	50.8	14%
Susquehanna	47.6	13%
Service Broadcasting Corp.	23.9	7%
All Others	58.7	16%
Total Market Revenue	\$ 366.0	100%
HHI		1,683
C2		51%
C4		77%

Atlanta		
2001		
Radio Group	Revenue in Millions	Share
Cox Radio	\$ 119.1	33%
Clear Channel	60.1	17%
Infinity	59.2	17%
ABC	31.7	9%
Jefferson Pilot	30.1	8%
All Others	55.5	16%
Total Market Revenue	\$ 355.7	100%
HHI		1,835
C2		50%
C4		76%

Selected Local Concentration Analyses for Radio – all data sourced from Duncan’s American Radio – Duncan’s Radio Market Guide: Supplement

Washington DC		
2001		
Radio Group	Revenue in Millions	Share
Clear Channel	\$ 91.2	28%
Infinity	86.3	26%
ABC	50.7	15%
Radio One	18.3	6%
Howard University	10.2	3%
All Others	72.1	22%
Total Market Revenue	\$ 328.8	100%
HHI		1,737
C2		54%
C4		75%

Houston		
2001		
Radio Group	Revenue in Millions	Share
Clear Channel	\$ 121.0	39%
Radio One	41.7	13%
Infinity	24.6	8%
Cox Radio	23.0	7%
Hispanic	22.3	7%
All Others	76.8	25%
Total Market Revenue	\$ 309.4	100%
HHI		1,882
C2		53%
C4		68%

Boston		
2001		
Radio Group	Revenue in Millions	Share
Infinity	\$ 127.3	42%
Entercom	57.0	19%
Greater Media	53.2	17%
Clear Channel	45.8	15%
All Others	22.2	7%
Total Market Revenue	\$ 305.5	100%
HHI		2,612
C2		60%
C4		93%

Selected Local Concentration Analyses for Radio – all data sourced from Duncan’s American Radio – Duncan’s Radio Market Guide: Supplement

Philadelphia		
2001		
Radio Group	Revenue in Millions	Share
Infinity	\$ 93.0	33%
Clear Channel	82.7	29%
Greater Media	27.7	10%
WEAZ Radio	26.1	9%
Radio One	12.1	4%
All Others	\$ 41.5	15%
Total Market Revenue	\$ 283.1	100%
HHI		2,132
C2		62%
C4		81%

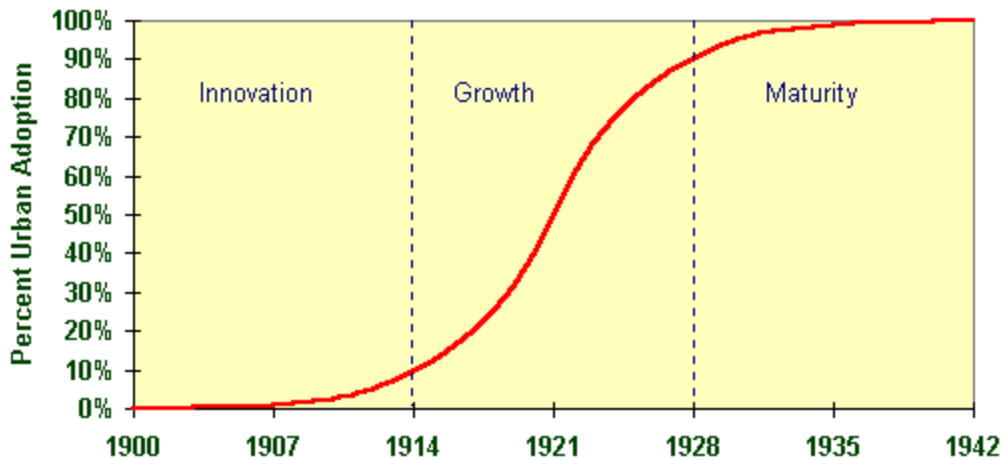
APPENDIX C¹¹⁷

INNOVATION CYCLES

The Product Innovation Cycle

Without exception, all new technologies experience three stages of growth and development: an innovation phase, a growth phase and a maturity phase. It takes about the same time for a new technology or product to go from zero to 10% adoption (the innovation phase) as it does for it to go from 10% to 90% adoption (growth phase) and as it does from 90% to 100% (maturity phase). These three stages are shown graphically in what is called an S-curve. The S-curve for the automobile is shown below in Figure A. (The Great Boom Ahead, pp. 106-8).

Figure A. S-curve for the automobile



The Innovation Cycle for the Economy

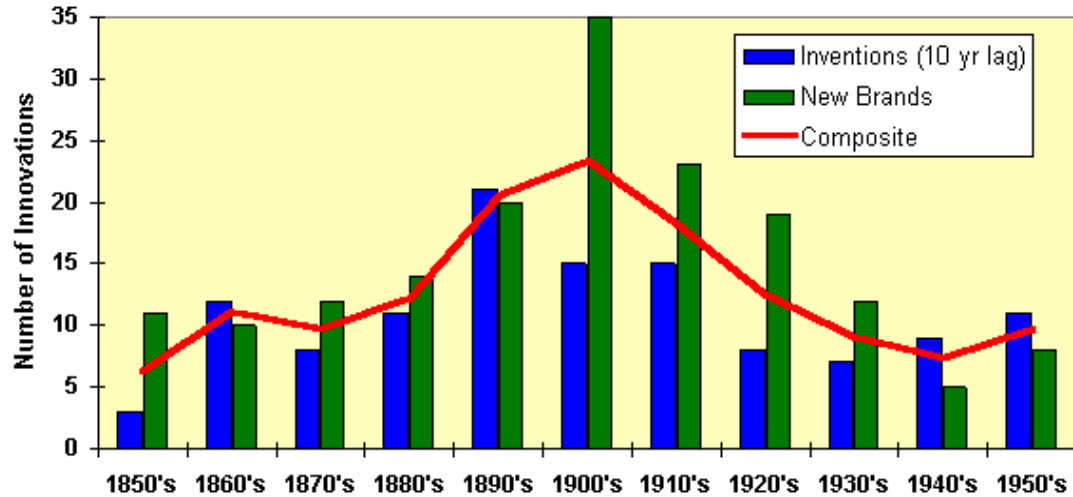
The S-curve concept can be usefully extended to the entire economy. It is worth noting that some periods are richer in entrepreneurial activity than others. Dent refers to periods like these as the innovation phase for the entire economy.¹¹⁸ While initially operating on the periphery of the market, gradually the new technologies/products are adopted by a small, but significant, fraction of the economy. When this occurs, the nascent economy begins its growth phase, during which the new technologies move into the mainstream. To date, the development of the new economy follows the same S-curve as does the development of an individual product or technology with an *innovation period* (0-10% adoption) followed by a *growth boom* (10-90% adoption).

As Dent notes, the next phase of the developing economy is the *shakeout*. The shakeout occurs when many firms, attracted by the opportunities of the growth boom, encounter increased competition as the market becomes saturated, resulting in increased price competition and business failures. The shakeout is a period of deflation and depression. It is also a period of innovation, but of a different sort.

¹¹⁷ This discussion is taken from Dent, Harry S., Jr. "The Great Boom Ahead: Your Comprehensive Guide to Personal and Business Profit in the New Era of Prosperity." 1993. Hyperion.

¹¹⁸ Op. Cit

Figure B. Innovations (inventions and new brands) per decade around the turn of the



century.

Source: *Entrepreneurs*, Joseph and Suzy Fuchini (from *The Great Boom Ahead* p 140).

During the shakeout, new technologies and products are developed that complement and improve upon the original technologies. Of the many new-economy companies that existed at the end of the growth period, only a few successfully employ the new complementary technologies and products to win the competition and survive the shakeout. Following the shakeout, a new growth period begins, during which improved versions of otherwise mature products are sold. This period is called the *maturity boom*.

Another way of describing the maturity boom is the growth phase of the mature-type innovations. In this concept the shakeout is the overlap of the basic innovation's mature phase and the mature innovations's innovation phase. The complete economic cycle is as follows: (1) innovation period; (2) growth boom; (3) shakeout; (4) maturity boom.

A good example of how a maturity boom innovation differs from the basic innovation leading to the growth boom is mainframe computers versus personal computers. When the mainframe computer was developed in the late 1940's and 1950's, they were thought of as engineering/business machines. Among the earliest computer languages were FORTRAN (FORMula TRANslation) for scientific/engineering applications and COBOL (COMMON Business Oriented Language) for business purposes.

Early computers were well-suited for tasks similar to those that an earlier generation of mechanical devices (tabulators, adding machines etc.) had been invented to perform. These devices had been innovations around the turn of the century and had spawned such corporations as IBM, NCR and Burroughs. These business machine companies adopted mainframe computers as improved business machines. By doing so they prospered in the postwar maturity boom. When minicomputers arrived in the early 1960's they were seen as cheaper versions of main frames and used for much the same purpose. Thus, the minicomputer can be seen as merely an extension of the mainframe computer and not as a new basic innovation.

In contrast, when the microcomputer was first developed in the early 1970's it was not seen as a smaller version of the minicomputer. The microcomputer was first commercialized as a consumer product: the personal computer or PC, and not as an improved business or engineering machine. After a while, it became clear that a PC was not a calculational device (although it can certainly be used as such), but rather a thinking tool. People wrote documents, created visual art (graphics), analyzed data with spreadsheets and, especially, played games. All these activities are creative rather than repetitive tasks. The applications for the PC are dramatically different from those of the mainframe or minicomputer. Rather than an improved way of doing a pre-existing function they introduced a new function and so constitute a new basic innovation and not a mature innovation.

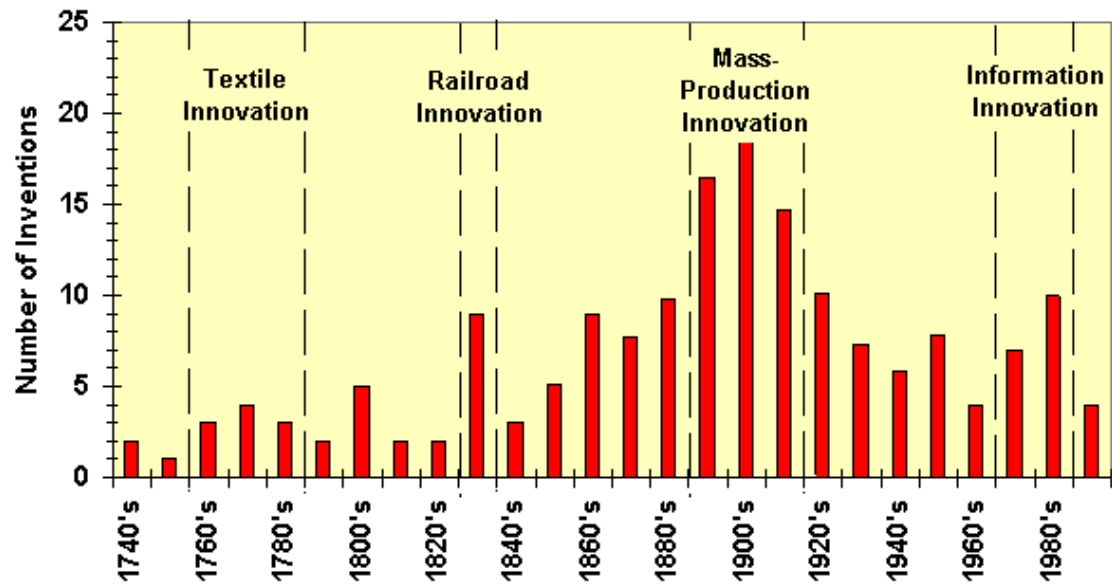
By looking at the timing of important basic innovations we can obtain an idea of when each economic cycle began. [Figure C](#) shows the composite innovations from [Figure B](#) along with more invention data for earlier periods. Four periods of enhanced innovation can be identified, which are co-incident with four major innovations. The first cluster is centered in the 1770's and is associated with the early textile manufacturing innovations that comprise the beginning of the Industrial Revolution. A second cluster centered in the 1830's is associated with the development of the railroad. The third cluster centered in the 1900's is associated with the development of the automobile and other mass-market consumer products. A fourth cluster of innovations in the 1970's and 1980's is associated with the internet and personal computer revolution. Like the [spending wave](#), the periods of heightened entrepreneurial activity designated by these clusters of innovations can be thought of as an *innovation wave* that periodically surges through the economy, beginning a new economic cycle.

The following table lists the four economic cycles initiated by the four innovation waves:

Dates	Economy	Example Basic Innovation	Example Maturity Innovation
1760-1830	Industrial Revolution	Spinning Jenny (1764)	Cotton Gin (1793)
1830-1890	Railroad Era	B&O Railroad (1830)	Refrigerator Car (1872)
1890-1970	Manufacturing Era	Ford Motor (1903)	Automatic Transmission (1940)
1970-	Information Age	Microprocessor (1972)	--

It should be stressed that the innovation-growth boom-shakeout-maturity boom structure of an economic cycle only applies to the most-advanced economies of the time. For example, the complete Industrial Revolution cycle only occurred in Great Britain. The United States began its own industrialization during the end of this period. Thus, the American innovation of the cotton gin was simultaneously a maturity-type innovation for the British textile industry and a basic innovation for the antebellum cotton economy of the American South. The railroad era occurred in its entirety in both Great Britain and North America. Western Europe began industrialization during this cycle, and Japan at the its end. The complete manufacturing era cycle occurred in the North America, Western Europe and, after a lag, Japan. Today the information economy cycle is unfolding in North America, Western Europe, and Japan.

Figure C. Numbers of innovations per decade showing historical innovation



peaks